

**NOVA PARKS REQUEST FOR PROPOSAL**  
**Solar Installation and/or Solar Power Purchase Agreement for Algonkian Regional Park**  
**47001 Fairway Dr, Sterling, VA 20165**

Attn: Todd Hafner  
NOVA Parks Purchasing Agent  
5400 Ox Road  
Fairfax Station, VA 22039  
703-795-2297  
[thafner@nvrpa.org](mailto:thafner@nvrpa.org)

Issued: October 25, 2023  
**RFP OPENING DATE AND TIME: December 6, 2023**  
**2:00 p.m. Eastern Time**

THE UNDERSIGNED AGREES TO PERFORM ANY CONTRACT AWARDED AS A RESULT OF THIS RFP, IN ACCORDANCE WITH THE REQUIREMENTS OF TERMS & CONDITIONS SPECIFIED HEREIN. THE SIGNATURE BELOW SHALL BE PROVIDED BY AN AGENT AUTHORIZED TO BIND THE COMPANY. FAILURE TO EXECUTE THIS PORTION MAY RESULT IN REJECTION OF THE OFFERORS PROPOSAL.

Offeror Legal Name:	
Virginia State Contractor License Number:	
Offeror Contact Name:	
Offeror Address:	
Offeror Contact Telephone Number:	
Authorized Agent Signature:	
Authorized Agent Name (Printed):	
Authorized Agent Title:	
Authorized Agent Contact E-mail:	
Authorized Agent Contact Phone:	
Date of Proposal:	

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## SECTION I: PURPOSE, BACKGROUND AND SCOPE OF SERVICES

### A. Purpose:

NOVA Parks is requesting proposals from qualified firms to provide a roof mounted solar system through either a solar power purchase agreement or a direct purchase for a rooftop utility-interactive solar photovoltaic system at the following locations:

Algonkian Regional Park Woodlands Event Center  
47001 Fairway Dr, Sterling, VA 20165

Offerors may submit a proposal for either a solar power purchase agreement or a direct purchase, or both.

If the resulting agreement is a solar power purchase agreement, as a condition of contract award the Contractor shall provide a twenty-five (25) year solar PV system operation and maintenance bond.

### B. Project Objectives:

The Contractor shall determine size and output of roof mounted solar system that will maximize the amount of energy generated not to exceed 200,000 kWh annual production.

The Contractor shall provide a total “turnkey” project including all necessary equipment, materials, design, manufacturing, and installation services for the installation of the roof mounted utility-interactive photovoltaic systems through either a solar power purchase agreement or a direct purchase.

### C. Scope of Services:

The Contractor shall perform all services as necessary to provide a complete design package including the requirements outlined below. NOVA Parks anticipates that the resulting agreement will have a term of up to twenty-five (25) years. If NOVA Parks purchases the system through a solar power purchase agreement, the Contractor shall own the solar PV system for the term of the resulting agreement.

The Contractor shall install the project such that it is operational and compliant with all applicable local, state, and federal standards and requirements, building codes and Dominion interconnection requirements. The Contractor shall include all specifications, calculations, and drawings in the design package. After approval by NOVA Parks of the final design package, the Contractor shall provide all necessary services to successfully complete the photovoltaic system installation. Regardless of whether the resulting agreement will be a solar power purchase agreement or a direct purchase, the Contractor shall apply for and manage the rebate funding under a utility and with renewable energy certificates (RECs) paperwork. The rebate funding shall offset the cost of the project to NOVA Parks.

#### 1. Task 1 - System Design

NOTE: None of the work in this section (Task 1 – System Design) is required to be completed and submitted with the RFP response. This work will be required of the successful proposer after a contract is awarded. However, it shall be the proposer’s responsibility to complete all necessary investigation and design work to be able to provide a binding kWh cost with its RFP response and to provide the system design details described in Part VI of Proposal Submittal Requirements.

The Contractor shall complete individual system designs:

- a. Provide all field investigation of the existing sites. The Contractor is responsible for all field verification of existing conditions to include building dimensions, roof dimensions, roof construction, structure and electrical systems for the solar PV system design and installation. NOVA Parks will make any existing design documents available to the Contractor. NOVA Parks does not guarantee the accuracy of any documents provided and the Contractor is responsible for verification of existing conditions.
- b. Provide a complete solar PV system design that complies with national, state and local electrical codes and is stamped by a Licensed Commonwealth of Virginia Professional Engineer.
  - 1) Provide full electrical design of the PV system interconnection with the existing building's electrical service and electrical distribution panels. Design shall include location of all new electrical equipment on electrical floor plan, electrical one line diagram (new work and demolition), electrical floor plans, revised panel schedules and details. Electrical design shall be stamped by a Commonwealth of Virginia Licensed Professional Engineer.
- c. The rooftop-installed solar PV system design must include the following:
  - 1) Full structural load analysis stamped by a Commonwealth of Virginia Licensed Professional Engineer.
  - 2) Solar panel roof layout drawings, roof structural mounting details, and structural connections details to the roof or building framing systems necessary to support and accommodate the proposed solar PV system. Structural design and roof mounting design shall be stamped by a Commonwealth of Virginia Licensed Professional Engineer.
- d. Inspect the facilities and submit, in writing to NOVA Parks, an itemized list of any concerns which may impede the installation of a solar PV system and/or potentially compromise the roof warranty over the duration of the resulting agreement.
- e. Coordinate and obtain all required interconnection agreements with Dominion.
- f. Provide complete specifications, calculations, and drawings.
- g. Obtain Loudoun County approval of the design package.
- h. *Deliverables:* At a minimum, the Final Design Documents shall include:

- i. Equipment Information:
  - 1) System description
  - 2) Layout of installation
  - 3) Selection of key equipment and layout of equipment
  - 4) Performance of equipment components, and subsystems
  - 5) Specifications for equipment procurement and installation
  - 6) All engineering design drawings for the structural modifications and details
  - 7) All engineering design drawings for the electrical modifications, new equipment installation and details
  - 8) Controls, monitors, and instrumentation
  - 9) Operation and maintenance service plan
  - 10) Equipment warranty of PV System
  
- ii. Installation Interconnection Information:
  - 1) Solar electric array orientation (degrees)
  - 2) Solar electric module tilt (degrees)
  - 3) Electrical grid interconnection requirements
  - 4) Integration of solar PV system with other power sources
  - 5) System type and mode of operation (utility interactive)
  
- iii. Performance Characteristics
  - 1) Shading calculation documentation
  - 2) Total system output
  - 3) Estimated kWh/month per array (shown over a 12-month period)
  - 4) Warranties and performance guarantees for the power output generated by the solar system
  
- iv. Interconnection Agreement
  - 1) Provide confirmation that the PV systems will be designed to comply with applicable Dominion interconnection requirements.

## 2. Task 2 – System Installation

- a. Provide all local building permits as required. Provide a copy of all permits to the NOVA Parks Project Manager. NOVA Parks will provide Asbestos Certification for each building as required for the permit application.
  
- b. Provide all materials, equipment, wiring, ancillary items, etc. necessary for 100% complete installation and commissioning of a solar PV system.
  
- c. Install solar PV inverter equipment and its related components and environmental control systems in a location to allow for ease of maintenance and monitoring, efficient operation, low operating losses, and compatibility with existing facilities. This location will be designated and approved by NOVA Parks during the design review in Task 1.
  
- d. Manage the interconnection and startup of the project in coordination with NOVA Parks and Dominion Energy.

- e. Pay for any interconnection, processing, and other fees and expenses as may be required by Dominion Energy for interconnection and operation of the solar PV system.
  - f. Schedule and coordinate power interruptions and obtain NOVA Parks approval prior to commencing power interruptions. Notification for power interruptions shall be fourteen (14) days prior to any power shutdown or interruption. Power shutdown shall be limited to eight (8) hours unless approved by NOVA Parks.
  - g. Limit roof penetrations to reduce risk of leaks and damage to existing roof finishes.
  - h. Minimize exposed fasteners, sharp edges, or system placement which may be conducive to damage to the modules or support structure.
  - i. Use of untreated ferrous metals, wood, or plastic components will not be permitted.
  - j. Use corrosion resistant, including galvanic corrosion, stainless steel and durable materials.
  - k. *Deliverable:* One installed and commissioned roof mounted solar PV systems connected to Dominion's grid.
  - j. Task 3 – Solar PV System Operation and Maintenance
    - a. Maintain the solar PV system to ensure continuous delivery not to exceed the maximum kilowatts of solar-generated electric power for the duration of the resulting agreement, including cleaning, performing upgrades and making necessary repairs due to weather, moisture damage, or any other cause for which NOVA Parks is not solely responsible.
    - b. Provide a method, acceptable to the NOVA Parks, of metering all electric power production from the solar PV system (hourly intervals at a minimum) and making the electronic data available for monitoring by NOVA Parks.
    - c. In the event of roof repairs or replacement services by NOVA Parks, relocate the solar PV system to allow for the repairs or replacement of the roof, and upon completion of the repairs or replacement, reinstall the solar PV system to an operable condition. Costs for this work to be paid for by NOVA Parks.
    - d. At the Contractor's sole expense, make all repairs (or replacements) to the roof and other NOVA Parks and private property caused by the Contractor, including relocating the solar PV system to allow the Contractor to make all necessary roof repairs (or replacement), and reinstalling the solar PV system to an operable condition; and
    - e. In the event that emergency roof repairs or solar PV system repairs are necessary for building integrity or safety reasons such as in situations like storm damage, remove or relocate the
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solar PV system or repair the solar PV system, as applicable, as soon as possible, but in any event within 48 hours of notice.

f. If the resulting agreement is for a direct purchase, NOVA Parks may elect to provide operation and maintenance either in-house or by other contractors.

g. *Deliverables:*

1) Meter data from the PV systems updated hourly available for monitoring on a vendor-provided website.

2) Annual reports on the condition of each system.

k. Task 4 – Solar PV Decommissioning

If the resulting agreement is a solar power purchase agreement, and if NOVA Parks does not elect to retain the solar PV system for self-operation at the end of the contract term, the Contractor shall decommission, remove and properly dispose the solar PV system from the facility and restore all elements of the facility affected by the installation or removal of the solar PV system to its pre-project condition. NOVA Parks to pay the costs for this work to Contractor or may elect to have this work completed by others.

#### **D. Miscellaneous**

1. Attachments to this RFP include the following:

a. NVRPA Document GC101 Instructions to Bidders and General Conditions of the Contract for Construction. The terms of this document will be incorporated into the contract with the successful proposer.

b. Woodlands at Algonkian Solar Feasibility Study dated 12/5/22

The Solar Feasibility Study is being provided for informational purposes only. Offerors shall not rely on any information in this study during preparation of its RFP submission.

2. Solar panels or any other related equipment shall not be installed on the golf cart shed roof on the east end of the building.

3. NOVA Parks shall trim the trees noted in the Solar Feasibility Study to maximize power generation.

4. The following table indicates the monthly electric usage over a recent 12-month period. The annual total for this particular time period was 335,680 kWh.

Month	Year	kWh
Nov	21	26,400
Dec	21	30,240
Jan	22	36,960
Feb	22	37,760
Mar	22	28,160
Apr	22	21,600
May	22	20,320
Jun	22	24,800
Jul	22	31,200
Aug	22	29,760
Sep	22	27,520
Oct	22	20,960
	TOTAL	335,680



## SECTION II: INSTRUCTIONS TO OFFERORS

### **A. Contact with NOVA Parks Staff, Representatives, and/or Agents:**

Direct contact with NOVA Parks staff, representatives, and/or agents other than the Purchasing Agent on the subject of this RFP or any subject related to this RFP is expressly prohibited except with the prior permission of the Purchasing Agent.

### **B. Pre-proposal Conference and Site Inspections:**

There will be a non-mandatory pre-proposal conference/Teams meeting on Monday, November 27, 2023 at 11:00 am. Offerors must contact Purchasing Agent to register for the meeting and to obtain the Teams meeting invite.

Site visits to inspect the facilities must be coordinated in advance by contacting the Purchasing Agent.

### **C. Questions and Addenda:**

Offerors shall carefully examine this RFP and any Addenda. Offerors are responsible for seeking clarifications of any ambiguity, conflict, omission, or other errors in this RFP in writing. Questions shall be submitted to Purchasing Agent. If the answer materially affects this RFP, the information will be incorporated into an Addendum and posted on the NOVA Parks website ([www.NOVAParks.com](http://www.NOVAParks.com)). This RFP and any Addenda shall be incorporated by reference into any resulting Agreement.

Oral comments and/or instructions do not form a part of this RFP. Changes or modifications to this RFP made prior to the date and time of closing will be addressed by Addendum.

All questions shall be submitted no later than 5:00pm EST on November 29, 2023. Questions received after that time will not be considered.

### **D. Offeror Obligation:**

Offeror shall carefully examine the contents of this RFP and any subsequent addenda and inform itself fully of the conditions relating to services required herein. Failure to do so shall not relieve the successful offeror of its obligation to fulfill the requirements of any contract resulting from this RFP.

**E. Schedule of Events:**

<b>Event</b>	<b>Date</b>
RFP Issued	October 25, 2023
Pre-proposal Conference	November 27, 2023
Question Deadline	November 29, 2023
Proposals Due	December 6, 2023
Contract commences	TBD

**F. Preparation of Proposals:**

In presenting their proposals, offerors are encouraged to be thorough in addressing the specific requirements and scope of work and the Submittal Requirements set forth in Section IV. It is solely the offeror’s responsibility to ensure that all pertinent and required information is included in its proposal. Failure to adhere to the format set forth in Section IV and to include the required information could result in a poor evaluation of the offeror’s proposal. NOVA Parks reserves the right to determine if a proposal is incomplete.

**G. Proprietary Information/Non-Disclosure:**

Offeror is advised that the Code of Virginia, 1950, as amended, shall govern public inspection of all records submitted by Offeror. Specifically, if Offeror seeks to protect any proprietary data or materials, pursuant to § 2.2-4342, Offeror shall: invoke the protections of this section prior to or upon submission of the data or other materials, provide a statement that identifies the data or other materials to be protected and that states the reasons why protection is necessary. Submit trade secrets, confidential documents or other proprietary information in a separate file clearly marked “PROPRIETARY”. Each page should be identified as proprietary individually.

Information submitted that does not meet the above requirements will be considered public information in accordance with State statutes. References to the proprietary information may be made within the body of the proposal; however, all information contained within the body of the proposal shall be public information in accordance with State statutes. Trade secrets, confidential documents or proprietary information submitted by an offeror in conjunction with this RFP are not subject to public disclosure under the Virginia Freedom of Information Act (“VFOIA”). Information submitted that does not meet the above requirements will be considered public information in accordance with the VFOIA. An all-inclusive statement that the entire Proposal is proprietary and/or confidential is unacceptable. A statement that offeror’s costs and/or proposal pricing are to be protected is unacceptable. Offeror will be requested to remove any such statement(s) in order to be eligible for further consideration.

**H. Exceptions to the NOVA Parks General Conditions:**

Offeror shall identify any exceptions to the terms of the NOVA Parks General Conditions and this RFP, including any proposed revision(s), and an explanation of why any such revision is needed. For each exception, offeror will specify the page number, section number, and the exception taken. Offeror must not incorporate its standard contract document into its proposal, by reference or in full text, without listing each exception it represents to the terms and conditions of this RFP.

**I. Proposal Binding for One Hundred Eighty (180) Days:**

Offeror agrees that its proposal shall be binding and may not be withdrawn for a period of one hundred eighty (180) calendar days after the scheduled closing date of this RFP.

**J. Cost incurred in Responding:**

This RFP does not commit NOVA Parks to pay any costs incurred in the preparation and submission of proposals or in making necessary studies or designs for the preparation thereof, nor to procure or contract for services.

**K. Disposition of Proposals:**

On receipt by NOVA Parks, all materials submitted in response to this RFP will become the property of NOVA Parks. All proposals shall be retained for official files and will become a public record after the award and subject to the Virginia Freedom of Information Act (“VFOIA”) provisions.

**L. Proposal Evaluation Process:**

Evaluation of proposals will be within the discretion of NOVA Parks. It is the intent of this RFP that all services be provided complete in all respects without need by NOVA Parks to engage separate technical expertise of services. Upon receipt of the proposals, NOVA Parks will evaluate all materials submitted by responding firms and rank the proposals using the following 100-point scale:

<b>Criterion</b>	<b>Points</b>
Qualifications	15
Methodology/Technical Approach for Program	15
References	10
Operations and Maintenance Plan	10
System Design	10
Price/ Financial Benefit to NOVA Parks	40
<b>TOTAL</b>	<b>100</b>

**M. Presentations:**

If, in NOVA Parks opinion, offeror presentations or demonstrations of the proposals are warranted, NOVA Parks will notify the selected offerors. Such presentation or demonstration will be at a NOVA Parks site at a date and time mutually agreed to between NOVA Parks and offeror. Travel will be at the offeror's expense.

**N. Award:**

The award of a contract(s) shall be at the sole discretion of NOVA Parks. Award(s) will be made to the Offeror(s) whose proposal is determined to be most advantageous to NOVA Parks, taking into consideration the evaluation factors set forth in this RFP. NOVA Parks reserves the right to cancel the solicitation and to waive informalities. NOVA Parks also reserves the right to enter into any contract deemed to be in its best interest, including the award of a contract to more than one offeror.

Offerors shall submit proposals, in accordance with the RFP requirements and maintain compliance with all federal, state and local laws and regulations. NOVA Parks further reserves the right to make award(s) based on initial proposals submitted without further discussion of the proposals or deliberation. Therefore, the proposals should be submitted initially on the most favorable terms that the offerors can propose with respect to both price and technical capability. The contents of the proposal(s) of the selected offeror(s), as negotiated, will be incorporated and made a part of any NOVA Parks contractual obligation when the award(s) is made. Proposals will be initially evaluated on the basis of the written material provided, with clarifications requested as needed by the Purchasing Agent.

**O. Protests:**

Any offeror, who desires to protest the award or decision to award a contract, shall submit the protest in writing to the NOVA Parks Purchasing Agent no later than ten (10) days after the award or the announcement of the decision to award, whichever occurs first. Public notice of the award or the announcement of the decision to award shall be given by NOVA Parks, in the manner prescribed in the terms or conditions of the RFP.

No protest shall lie for a claim that the selected offeror is not a responsible offeror. Notwithstanding the requirements specified herein, the written protest shall be addressed to NOVA Parks Purchasing Agent and shall include the basis for the protest and the relief sought to be considered valid. NOVA Parks shall issue a decision in writing stating the reasons for the action taken. This decision shall be final unless the offeror appeals within ten (10) days of receipt of the written decision by instituting legal action. Nothing in this subsection shall be construed to permit an offeror to challenge the validity of the terms or conditions of the RFP. Pending final determination of a protest or appeal, the validity of a contract awarded and accepted in good faith in accordance with this chapter shall not be affected by the fact that a protest or appeal has been filed.

**P. Cooperative Procurement:**

The procurement of goods and/or services provided for in the resulting contract is being conducted pursuant to Virginia Code § 2.2-4304. Therefore, the successful offeror may contract with any other public agency or body in the Commonwealth of Virginia who so desires, to permit those public agencies or bodies to purchase such goods and/or services at contract prices, in accordance with the terms, conditions, and specifications of this procurement. The successful offeror shall deal directly with each public agency or body seeking to obtain any goods and/or services pursuant to the resulting contract or from this procurement and in accordance with Virginia Code § 2.2-4304. NOVA Parks shall not be responsible or liable for any costs, expenses, or any other matters of any type to either the successful offeror or the public agency or body seeking to obtain any goods and/or services pursuant to this

cooperative procurement provision. Each entity shall be responsible for the administration of its individual contract with the successful offeror.

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## **SECTION III: CONTRACT TERMS AND CONDITIONS**

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1. This project shall be administered as a competitive negotiation procurement in accordance with the Virginia Public Procurement Act.
2. This Agreement is made under and shall be construed according to the laws of the Commonwealth of Virginia. In the event of litigation, the venue shall be Fairfax County, Virginia.
3. The terms of the attached NVRPA Document GC101 Instructions to Bidders and General Conditions of the Contract for Construction (General Condition) shall apply to this solicitation and to any contract awarded as a result of this RFP. In the event of a discrepancy between the terms of the RFP and the General Conditions, the RFP terms shall take precedent.
4. NOVA Parks may work with the successful Offeror to negotiate agreements to complete similar solar installations at other NOVA Parks facilities without the completion of an additional RFP procurement process.

## SECTION IV: PROPOSAL SUBMITTAL REQUIREMENTS

### A. Proposal Submission:

Proposals must be submitted electronically via email to the Purchasing Agent AND an original hard copy must be submitted to the attention of the Purchasing Agent at NOVA Parks Headquarters, 5400 Ox Road, Fairfax Station, Virginia 22039. Proposals must be submitted before the date and time due specified in the solicitation.

### B. Proposal Standards:

Proposal shall meet standards of professional writing established for the type of report or written material provided, shall be thoroughly researched for accuracy of content, shall be grammatically correct and not contain spelling errors and shall be submitted in a format outlined herein. Whenever possible, proposals submitted in response to this RFP shall comply with the following guidelines:

- Unnecessary attachments or documents not specifically asked for should not be submitted; and
- Proposals shall address the below areas, not exceeding the stated page limitations (if any). The proposal shall be limited to a page size of 8 ½" x 11", single space and type size shall not be less than 10-point font for each response item. If a page limit is not noted within the section below there is no page limit.

### C. Unnecessarily Elaborate Responses:

Unnecessarily elaborate brochures or other presentations beyond those sufficient to present a complete and effective response to this RFP are not desired and may be construed as an indication of the respondent's lack of cost consciousness. Elaborate or expensive art work, paper, bindings, and visual and other presentations are neither necessary nor desired by NOVA Parks.

### D. Format of Proposals

Offeror shall respond to this RFP with a written proposal in the format outlined below. The proposal shall include, at a minimum, the following sections, each under separate tabs and in the order below:

Additional instructions are in Section II of this RFP.

- I. RFP Cover Page
- II. Qualifications
- III. References
- IV. Methodology/Technical Approach for Program
- V. Operations and Maintenance Plan
- VI. System Design
- VII. Price/ Financial Benefit to NOVA Parks
- VIII. Exceptions to NOVA Parks contractual terms and conditions
- IX. Appendix

Information required in each section:

**I. RFP Cover Page:**

Offerors shall complete and sign the cover page of this RFP and submit with proposal.

**II. Qualifications:**

Demonstrate the Offeror's, and their proposed staff's, qualifications and experience in providing the services as requested in this Request for Proposal. If subconsultants or subcontractors are to be utilized, provide similar documentation to what has been requested of the Contractor in this section.

If proposing a solar power purchase agreement, demonstrate Offeror's experience with solar power purchase agreements and the ability to secure letter(s) of commitment from financial entity.

Demonstrate through documentation Offeror's financial capacity and ability to successfully continue to provide service throughout the contract term.

**III. References:**

Provide at least three (3) completed projects, along with photos, similar in scope and complexity and fully functioning for which Contractor was the awarded (primary) firm.

The referenced projects shall have been performed in Virginia within the past 5 years. For each reference provide the names of the contracting organization, address of the project location, contact person's name, email address and telephone number, as well as nature of work performed and total project cost.

Provide name and contact information for all design firms and subcontractors. Include first year PV generation at delivery point (kW, MWh, Capacitor factor %), PPA Term (years), and location of point of delivery (distribution system or other).

**IV. Methodology/Technical Approach for Program:**

Provide explanation of proposed technical approach and a detailed outline of the proposed program for executing the requirements of the technical scope and achieving project objectives to include master schedule for completion of design and installation work.

The Offeror's explanation should demonstrate its understanding of the technical and administrative requirements for participation in the SCC pilot program under the VEPGA Agreement and Uncodified Chapter 382 and comprehensively cover scheduling, design, performance, warranties, equipment, layout, mounting, interconnection, and monitoring.

Demonstrate Offeror's performance bonding capability for the solar PV installation.

Address factors which the Offeror believes to differentiate it from other Offerors for this project. Address Offeror's strengths in the marketplace.



**V. Operations and Maintenance Plan:**

Describe the proposed O&M procedures for the system, detailing duties performed and if the contract will be maintained with the Offeror or a third-party provider.

**VI. System Design:**

System Design and Components are not binding at the proposal stage, but this information will be used to evaluate Offeror proposals.

- a. Components: Include an overview of the proposed photovoltaic system, including brief descriptions of the main components (at minimum modules, inverters, racking system, and monitoring system) including manufacturer and warranty information. Offerors are encouraged to provide specification sheets for any proposed technologies as an appendix.
- b. Design: Include Preliminary Drawings for the proposed PV system that include (at a minimum):
  - System size (in kW DC and kW AC)
  - Location of modules (including tilt)
  - Location of inverters
  - Any other site-specific information that will aid in overall evaluation
- c. Expected System Generation: provide estimated annual production of the proposed solar project for years 1-25 inclusive of the degradation rates.

**VII. Price/ Financial Benefit to NOVA Parks:**

- a. If proposing for a PPA:
    - Specify price per Kilo-watt hour (kWh) of total proposed project for solar electricity delivered to NOVA Parks.
    - Specify proposed performance guarantees.
    - Propose a methodology for determination of a buy-out price in the event of an early termination by NOVA Parks, with alternative calculations based upon whether NOVA Parks retains the solar PV system, or if it is removed by the Contractor.
    - In addition to the PPA Cash Flow Chart for the site, data should be filled-in for the cost summary below:
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Cost Inputs		Solar System Inputs	
PPA Rate \$/kWh		Total kW Installed	
		kWh Solar Production Year 1	
		Degradation Rate Annually	

b. If proposing a system for direct purchase:

- Specify a total price to design and install the system in accordance with the requirements of the solicitation, to include all federal, state and local utility, energy or environmental incentives and rebates.
- Provide the cost of a 5-year maintenance contract, which includes training for NOVA Parks facility staff (electricians).
- Specify proposed performance guarantees for the system.

**VIII. Exceptions:**

Identify any exceptions to the NOVA Parks General Conditions or conditions of this RFP, including any proposed revision(s), and an explanation of why any such revision is needed.

**IX. Appendix:**

Other documents that may assist NOVA Parks in evaluating your proposal.

**NVRPA DOCUMENT GC 101  
INSTRUCTIONS TO BIDDERS AND  
GENERAL CONDITIONS OF THE CONTRACT  
FOR CONSTRUCTION**

**THIS DOCUMENT HAS IMPORTANT LEGAL CONSEQUENCES;  
CONSULTATION WITH AN ATTORNEY IS ENCOURAGED  
2018 EDITION**

<b>ARTICLE NUMBER</b>	<b>TITLE</b>
1.	Definitions
2.	Contract Documents
3.	Laws and Regulations
4.	Conditions at Site or Structure
5.	Explanation to Bidders
6.	Preparation and Submission of Bids
7.	Bid Guarantee
8.	Withdrawal or Modification of Bids
9.	Receipt and Opening of Bids
10.	Errors in Bids
11.	Rejection of Bids
12.	Standard Forms
13.	Award of Contract
14.	Contract Security
15.	Progress Schedules
16.	Shop Drawings, Product Data, Samples
17.	Materials, Services and Facilities
18.	Inspection and Testing
19.	Substitutions
20.	Patents
21.	Surveys, Permits, Regulations
22.	Protection of Work, Property and Persons
23.	Supervision by Contractor
24.	Changes in the Work
25.	Changes in the Contract Sum or Other Relief
26.	Time for Completion and Liquidated Damages
27.	Correction of Work
28.	Suspension of Work, Authority's Right to Stop and Carry Out the Work
29.	Termination
30.	Uses of the Premises
31.	Payment to the Contractor
32.	Substantial Completion of the Work
33.	Final Completion and Final Payment
34.	Insurance
35.	Assignments
36.	Indemnification
37.	Contractor Liability
38.	Separate Contracts
39.	Subcontracting
40.	Engineer
41.	Warranty
42.	Contractual Disputes

**GENERAL CONDITIONS  
OF THE CONSTRUCTION CONTRACT WITH  
THE NORTHERN VIRGINIA REGIONAL PARK AUTHORITY**

**Article 1: DEFINITIONS**

- (a) **Addenda** – Written or graphic instruments issued prior to the Award of the Contract which modify or interpret the Contract Documents, Drawings, and Specifications by additions, deletions, clarifications, or corrections
- (b) **Engineer** – The design professional, including an architect, that has contracted with the Authority to design the Project and administer the Contract on behalf of the Authority. If no Project Engineer is designated all duties and responsibilities which the Engineer would otherwise have shall be the duties and responsibilities of the Authority.
- (c) **Authority** – The Northern Virginia Regional Park Authority.
- (d) **Change Order** – A written order to the Contractor authorizing an addition, deletion or revision in the Work within the general scope of the Contract Documents or authorizing an adjustment in the Contract Price or Contract Time. A Change Order, which adjusts the Contract Price or Contract Time, must be signed by the Authority, Contractor and Engineer. A Change Order includes a Field Order, as hereafter defined.
- (e) **Construction Change Directive** - A written order to the Contractor signed by the Authority directing an addition, deletion or revision in the Work within the general scope of the Contract Documents prior to an agreement between the Authority and the Contractor as to an adjustment in the Contract Price or Contract Time. Upon receipt of a Construction Changes Directive, the Contractor shall promptly proceed with the change in the Work described therein.
- (f) **Contract Sum** – The total monies payable to the Contractor under the terms and Conditions of the Contract Documents.
- (g) **Contract Time** – The specific date or the number of days stated in the Contract Documents or the Notice to Proceed for Substantial Completion of the Work.
- (h) **Contractor** – Any person or entity who has a contract directly with the Authority for the performance of the Work or a part thereof.
- (i) **Day** – A calendar day of 24 hours lasting from midnight one day to midnight the next day.
- (j) **Drawings** – The graphic and pictorial part of the Contract Documents that show the characteristics and scope of the Work to be performed and that has been prepared by or for the Authority. The term is used interchangeably with the word “Plans” and includes Standard Details.
- (k) **Field Order** – A written order issued by the Engineer or the Authority to the Contractor during construction effecting a change in the Work, but not involving an adjustment in the Contract Price or an extension of the Contract Time.
- (l) **Inspector** – The authorized representative of the Authority assigned to make detailed inspection of any or all portions of the Work. The Inspector is authorized to stop the Work in accordance with Article 29.
- (m) **Notice of Award** – The written notice of the acceptance of the Bid from the Authority to the successful Bidder.
- (n) **Special Conditions** – General requirements that are unique to a particular Contract.
- (o) **Standard Details** – Details showing standard products, methods, and materials contained within the Plans or other agency standards such as the current versions of the Fairfax County Public Facilities Manual or the Virginia Department of Highways and Transportation Road and Bridge standards and specifications.

- (p) **Specifications – Special Conditions, Standard Specifications and Standard Details.**
- (q) **Subcontractor – An individual, firm or corporation having a direct contract with the Contractor or with any other subcontractor for the performance of a part of the Work at the site.**  
  
**Substantial Completion – That date as certified by the Engineer when the construction of the Project or a specified part thereof is sufficiently completed in accordance with the Contract Documents so that the Project or specified part can be utilized for the purposes for which it is intended and when the Contractor has received all final inspections and occupancy permits from the appropriate jurisdictions.**
- (r) **Supplementary General Conditions – Modifications to General Conditions required for the Project.**
- (s) **Supplier – Any person or organization who supplies materials or equipment for the Work (including that fabricated to a special design) but who does not perform labor at the site.**
- (t) **Work – Any and all labor, materials, equipment, and all obligations, duties, and responsibilities expressly stated or reasonably implied for the successful completion of the construction required by the Contract Documents. The Contractor’s Work includes payment of all sales, consumer, use, and other similar taxes required by law.**
- (u) **Written Notice – Any notice to any party of the Contract relative to any part of the Contract in writing and considered delivered and the service thereof completed when posted by mail to the party at its last given address, or delivered in person to the party or its authorized representative at the Project.**

**Article 2: CONTRACT DOCUMENTS**

- (a) **The agreement entered into by the parties shall consist of the Form of Construction Contract, the Form of Proposal submitted by the Contractor, the Supplemental General Conditions, these General Conditions, the specifications and drawings, including all modifications thereof, all of which shall be referred to collectively as the “Contract Documents.” The Form of Construction Contract shall be signed by the Authority and Contractor in as many original counterparts as may be mutually agreed upon. The Contract may be amended only by a written amendment to the Contract or a Change Order signed by both parties.**
- (b) **The Contract Documents are complimentary and what is required by one shall be binding on the Contractor as if required by all. In the event of any inconsistency between the Contract Documents, Contractor shall provide the greater quality or quantity of Work with no increase in the Contract Sum. The intent of the Contract Documents is that the Contractor shall furnish all labor, materials, tools, equipment, utilities, transportation and incidental work necessary for the proper execution of the Work in accordance with, or reasonably inferable from, the Contract Documents. In the event of conflicts among the Contract Documents, the Authority may designate the written or drawn provision or feature which shall be used and no additions to or deductions from the Contract Sum, or modification to the Contract Time, shall result from the choice. In case of conflicts, the Contract Documents shall take precedence in the following order: the Construction Contract; The Supplemental General Conditions; the General Conditions; the Special Conditions; the specifications; and the drawings.**
- (c) **This Contract is an entire and integrated agreement and is not severable.**
- (d) **Contractor shall identify in writing to the Authority and the Engineer, as soon as possible, any discrepancies, errors, omissions and/or inconsistencies or ambiguities, discovered by the Contractor in the Contract Documents. Work done by the Contractor after its discovery of such discrepancies, errors, omissions and/or inconsistencies or ambiguities and prior to response from the Engineer shall be done at the Contractor’s sole risk and cost.**

### Article 3: LAWS AND REGULATIONS

- (a) In the performance of the Work, the Contractor shall comply with the requirements of all local, state and federal laws, codes, statutes, ordinances, rules, regulations and lawful orders of any public authority relating to the performance of the Work (the “Legal Requirements”).
- (b) All Contractors and Subcontractors for the Project must be properly licensed under the laws of the Commonwealth of Virginia and in good standing before submitting any bid and before commencing any Work. Upon the request of the Authority, any Contractor or Subcontractor for the Project shall promptly provide proof of its licensure.
- (c) The Contract and all other contracts and subcontracts are subject to the provisions of Article 3 and 5, Chapter 4, Title 40.1, Code of Virginia, 1950, as amended, relating to labor unions and the “right to work,” and all Contractors or Subcontractors, whether residents or nonresidents of the Commonwealth, who perform any work related to the project shall comply with all of the provisions of these code sections.
- (d) The Contractor shall furnish the Authority copies of affidavits upon request giving the original dates, renewal dates and expiration dates of all labor contracts related to any phase of the work to be performed on the project site under this Contract.
- (e) Contractor shall comply with all local, state and federal safety codes, statutes, rules, practices and regulations.

#### (f) EQUAL OPPORTUNITY EMPLOYMENT

- (1) During the performance of the Agreement, the Contractor agrees as follows:
  - (i) The Contractor shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability or other basis prohibited by federal or state law relating to discrimination in employment, except where there is a bona-fide occupational qualification reasonably necessary to the normal operation of the Contractor. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
  - (ii) The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, shall state that Contractor is an equal opportunity employer.
  - (iii) Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the notice, advertisement, and solicitation requirements of this paragraph.
- (2) The Contractor shall cause to be included the provisions of the foregoing paragraphs a.(i), a.(ii) and a.(iii) (substituting the subcontractor or vendor for Contractor as the obligated party) in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.

#### (g) DRUG-FREE WORKPLACE

- (1) During the performance of the Agreement, the Contractor agrees to (i) provide a drug-free workplace for the Contractor’s employees, (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the Contractor’s workplace and specifying the actions that will be taken against employees for violations of such prohibition, (iii) state in all solicitations or advertisements for employees placed by or on behalf of the Contractor that the Contractor maintains a drug-free workplace, and (iv) cause to be included the provisions of the foregoing clause (substituting the subcontractor or vendor for the Contractor as the

obligated party) in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.

- (2) For the purposes of this section, “drug-free workplace” means a site for the performance of work done in connection with the Agreement by Contractor where its employees are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the Agreement.

**(h) NO EMPLOYMENT OF UNAUTHORIZED ALIENS**

Contractor represents and warrants that Contractor does not, and shall not during the performance of this Agreement, knowingly employ any unauthorized alien as defined in the Federal Immigration Reform and Control Act of 1986.

**(i) STATEMENT OF NONDISCRIMINATION AGAINST FAITH-BASED ORGANIZATIONS**

The Authority does not discriminate against faith-based organizations. (See Va. Code § 2.2-4343.1).

**(j) PROMPT PAYMENT REQUIREMENTS**

Within seven days after Contractor receives amounts paid for work subject to the Agreement performed by any “subcontractor,” as defined in Code of Virginia § 2.2-4347, Contractor shall take one of the two following actions:

- (1) Pay the subcontractor for the proportionate share of the total payment received from Owner attributable to the work performed by the subcontractor; or
- (2) Notify Owner and the subcontractor in writing of Contractor’s intent to withhold all or part of the subcontractor’s payment and the reason for nonpayment.

- (k) Contractor shall provide its Federal employer identification number with each application to Owner for payment.**

- (l) Contractor shall pay interest to any “subcontractor” on all amounts owed by Contractor that remain unpaid after seven days following receipt by Contractor of payment from Owner for work performed by such subcontractor relating to the Agreement except as to amounts withheld as retainage.**

- (m) Contractor shall include in its subcontracts a provision requiring each subcontractor to include or otherwise be subject to the same payment and interest requirements with respect to each lower-tier subcontractor.**

- (n) No obligation imposed by this section shall be construed to create any obligation of Owner under Code of Virginia § 2.2-4354, no modification to the Agreement may be made for the purpose of providing reimbursement for the interest charge, and Contractor shall not invoice Owner for any such charge.**

**(o) LIMITATION ON OWNER’S LIABILITY FOR INTEREST**

Owner shall not be liable to pay any interest to Contractor under any circumstance except in the case of amounts that Owner does not dispute to be due and payable to Contractor; interest shall accrue beginning on the 60<sup>th</sup> day after payment is due at a rate of 3% per annum.



**(p) AUTHORIZATION TO CONDUCT BUSINESS IN VIRGINIA**

The provisions of Va. Code § 2.2-4311.2 are incorporated by reference. If Contractor is a business entity described in Va. Code § 2.2-4311.2.A, Contractor must be authorized to transact business in Virginia if required by law to be so authorized and shall not allow its existence or certificate authority or registration to transact business to lapse or be revoked or cancelled during the term of the contract.

**Article 4: CONDITIONS AT SITE OR STRUCTURE**

- (a) All Bidders and Contractors shall visit the site and shall be responsible for having ascertained pertinent local conditions such as location, accessibility and general character of the site or building, and the character and extent of existing work within or adjacent to the site and to compare those conditions with the Contract Documents and the Legal Requirements. Claims, as a result of the Bidder's and/or Contractor's failure to comply with the foregoing, will not be considered by the Authority and are waived by the Contractor.

If in the performance of the Contract the Contractor discovers subsurface or latent conditions at the site that are materially different from those typical for the locality or indicated in the Contract Documents, the Contractor shall report the conditions to the Engineer and the Authority in writing before the conditions are disturbed. Upon such notice, or upon its own observation of such conditions, the Engineer shall promptly make such recommendations as it finds necessary to address the different conditions. Any change in the cost of the work or time needed for completion must be processed pursuant to the requirements of the Contract Documents.

**Article 5: EXPLANATION TO BIDDERS**

No oral explanation in regard to the meaning of drawings and specifications will be made and no oral instructions will be given before the award of the contract. Bidders shall identify in writing to the Authority and the Engineer any believed discrepancies, omissions, ambiguities or errors in the Contract Documents. Bidders must submit such a writing at least six (6) days prior to the time set for the receipt of bids to allow a sufficient time for a reply to reach them before the submission of their bids, but if there are two (2) weeks or less between the first bid advertisement and the time set for receipt of bids, then bidders may act up to three (3) days prior to the time set for receipt of bids. Any interpretation made will be in the form of an addendum to the specifications, which will be forwarded to all bidders, and its receipt by the bidder shall be acknowledged on the Bid Form.

**Article 6: PREPARATION AND SUBMISSION OF BIDS**

- (a) Bids shall be submitted in duplicate on the forms furnished, or true copies thereof, and shall be signed in ink. Erasures or other changes in a bid shall be explained or noted over the signature of the bidder. Bids containing any conditions, omissions, unexplained erasures, alterations or items not called for in the proposal, or irregularities of any kind, may be rejected by the Authority as being incomplete.
- (b) Each bid must give the full business address and contact information for the bidder and must be signed by a person with authority to bind the bidder. Bids by partnerships must furnish the full name of all partners and must be signed in the partnership name by one of the members of the partnership or an authorized representative, followed by the signature and designation of the person signing. Bids by corporations must be signed with the legal name of the corporation followed by the name of the state in which they are incorporated and by the signature and designation of the president, secretary or other person authorized to bind it in the matter. The name of each person signing shall also be typed or printed below the signature. A bid by a person who affixes to its signature the word "President," "Secretary," "Agent," or other designation without disclosing its principal, may be held to be the bid of the individual signing. When requested by the Authority, satisfactory evidence of the authority of the officer signing on behalf of the corporation shall be furnished.
- (c) Bids with the bid guarantee shall be enclosed in a sealed envelope, which shall be marked and addressed as indicated by the advertisement or invitation to bid. Prior to submitting a bid, the bidder must be in compliance with and have the licenses required under Virginia Code Section 54.1-

1100, et seq. The bidder shall place on the outside of the envelope containing the bid and shall place in the bid over its signature whichever of the following notations is appropriate, inserting its Contractor license number.

If the bidder shall fail to provide this information on its bid or on the envelope containing the bid and shall fail to promptly provide the Contractor license number to the Authority in writing when requested to do so before the opening of bids, its bid will not be considered.

- (d) The owner reserves the right to disqualify any Contractor and refuse to accept the bid of any bidder which has been convicted, or entered a plea of guilty or nolo contendere in any federal or state court to any charge involving any unlawful, corrupt or collusive practice involving a public contract either federal, state, or local or which has been determined in any judicial proceeding to have violated any antitrust, bid-rigging or collusive practice statute in connection with any public contract, or against whom such formal criminal prosecution or other judicial proceeding has been initiated.

#### Article 7: BID GUARANTEE

- (a) Any bid exceeding Five Hundred Thousand Dollars (\$500,000) shall be accompanied by a bid guarantee of not less than five percent (5%) of the amount of the bid, which may be certified check or cashier's check, or a Bid Bond made payable to the Authority. Bid Bonds shall be submitted on AIA Document A310. Such Bid Bond or check shall be submitted with the understanding that it shall guarantee that the bidder will not withdraw its bid during the period up to and including ninety (90) days following the opening of bids; that if its bid is accepted, it will enter into a formal contract with the Authority in accordance with the Form of Construction Contract included as a part of the Contract Documents, and that the referenced Performance Bond and Labor and material Payment Bond will be given; and that in the event of the withdrawal of the bid within the period, or failure to enter into the contract and give the bonds within ten (10) days after it has received notice of acceptance of its bid, the bidder shall be liable to the Authority for the difference between the amount of the bidder's bid and the amount of the bid for the next higher bidder to perform the Work but such amount shall not exceed the amount of the bid guarantee.
- (b) The Bid Bonds and checks will be returned to all except the three lowest bidders after the formal opening of the bids. The remaining Bid Bonds and checks will be returned to the lowest bidders after the Authority and the accepted bidder have executed the Contract and the Performance Bond and the Payment Bond have been approved by the Authority.
- (c) If the required Contract and bonds have not been executed within ninety (90) days after the date of the opening of the bids, then the bond or check of any bidder will be returned upon its request, provided it has not been notified of the acceptance of the bid prior to the date of such request.

#### Article 8: WITHDRAWAL OR MODIFICATION OF BIDS

A bidder may withdraw or modify its bid only by written notice delivered to the Authority prior to the time fixed for receipt of bids.

#### Article 9: RECEIPT AND OPENING BIDS

- (a) It is the responsibility of the bidder to assure that its bid is delivered to the place designated for receipt of bids and prior to the time set for receipt of bids. The Authority will not consider bids received after the time set for receipt of bids.
- (b) Bids will be opened at the time and place stated in the advertisement and the lowest bidder will be announced. The officer or agent of the Authority, whose duty it is to open the bids, will decide when the specified time has arrived. No responsibility will be attached to any officer or agent for the premature opening of a bid not properly addressed and identified.

#### Article 10: ERRORS IN BIDS

A bidder may withdraw its bid from consideration if the price bid was substantially lower than the other bids due solely to a mistake in the bid, provided the bid was submitted in good faith, and the mistake was a clerical mistake as opposed to a judgment mistake, and was actually due to an unintentional arithmetic error or an unintentional omission of quantity of work, labor or material made directly in the compilation of a bid, which unintentional arithmetic error or unintentional omission can be clearly shown by objective evidence drawn from inspection of original work papers, documents and materials used in the preparation of the bid sought to be withdrawn. Under this provision a bidder requesting to withdraw its bid shall follow the procedures set forth in Section 2.2-4330 of the Code of Virginia. The bidder must give notice in writing of its claim of right to withdraw its bid within the time frame required by Section 2.2-4330 of the Code of Virginia and shall submit its original work papers to the Authority in compliance with the requirements of Section 2.2-4330 of the Code of Virginia. Failure to strictly comply with the requirements of Section 2.2-4330 of the Code of Virginia shall constitute a waiver of the right to withdraw the bid.

No bid may be withdrawn when the result would be the awarding of the Contract on another bid of the same bidder. No bidder who is permitted to withdraw a bid shall for compensation supply any material or labor to or perform any subcontract or other work agreement for the person or firm to whom the contract is awarded or otherwise benefit, directly or indirectly, from the performance of the project for which the withdrawn bid was submitted, without the approval of the Authority. The person or firm to whom the Contract was awarded and the withdrawing bidder are jointly liable to the Authority in an amount equal to any compensation paid to or for the benefit of the withdrawing bidder without such approval.

If a bid is withdrawn under authority of this section, the next higher bidder shall be deemed to be the low bidder on the project.

#### Article 11: REJECTION OF BIDS

The Authority reserves the right to reject any and all bids when such rejection is in the interest of the Authority, and will reject the bid of a bidder who is not a responsible bidder. (See § 2.2-4319, Code of Virginia, 1950, as amended.)

#### Article 12: STANDARD FORMS

The copies of the Form of Construction Contract, and AIA Document A312, Performance Bond and the Labor and Material Payment Bond are incorporated into the General Conditions by reference and are made a part hereof to the same extent as though fully set forth herein.

#### Article 13: AWARD OF CONTRACT

- (a) The Contract will be awarded as soon as possible to the lowest responsive and responsible bidder, provided its bid is reasonable and it is in the interest of the Authority to accept it. The Authority reserves the right to waive any informality in bids received when such waiver is in the interest of the Authority; also to accept any item in the bid unless otherwise specified by the Authority. Each bidder shall be prepared, if so requested by the Authority, to present evidence of its experience, qualifications and financial ability to carry out the terms of the Contract.
- (b) If the bid forms contain alternate prices, the Authority may in its sole discretion, unless otherwise specified in the invitation for bid, select whatever alternates it chooses to accept subsequent to the bid opening but prior to the determination of the low bidder. The low bidder shall be determined by comparing each bidder's bid total based on the sum of the base bid and the alternates selected by the Authority.
- (c) Pursuant to the Virginia Public Procurement Act, in the event the lowest responsible bid exceeds available funds for the project, the Authority may enter into negotiations with the lowest responsible bidder in an effort to arrive at a contract amount within the limits of available funds. In such event, the Authority will inform the bidder of the amount of funds available, and will negotiate in good faith toward achieving the funding limit, preferably without any change in the scope or other change in the Contract Documents. However, negotiations may include change in scope, quantity of materials, or other changes, so long as any such changes are within the general scope of the original design. If the Authority and bidder reach agreement, the Authority may award a contract in accordance with procedures or actions approved by the Authority Board. The Authority may terminate negotiations

at any time prior to the award of a contract, and proceed as otherwise permitted by the Virginia Public Procurement Act.

#### **Article 14: CONTRACT SECURITY**

For all contracts of Five Hundred Thousand Dollars (\$500,000.00) or more, the Contractor shall deliver to the Authority or its designated representative, an AIA Document A312, Performance Bond and Labor and Material Payment Bond, each fully executed by one or more surety companies legally authorized to do business in Virginia and each in an amount equal to one hundred percent (100%) of the original Contract Sum. The bonds shall be conditioned as set forth in § 2.2-4337 of the Code of Virginia, as amended. Sureties shall be selected by the Contractor subject to approval by the Authority. No contract shall be deemed to be in effect until the bonds have been approved by the Authority. For the purposes of all Labor and Material Payment Bonds entered into pursuant to this Article, the term “subcontractors” as used in § 2.2-4337 A.2 of the Code of Virginia is interpreted to mean any contractors who participated in the prosecution of the Work undertaken by the Contractor, whether such subcontractor had a direct contract with the Contractor or whether there were one or more other intervening subcontractors.

#### **Article 15: PROGRESS SCHEDULES**

- (a) The Contractor shall, within ten (10) days of receipt of notice of award, prepare and submit to the Authority and Engineer a schedule for the completion of the Work within the timeframe set forth in the Contract Documents. This progress schedule shall be related to the entire Project; shall include all the Work; and shall meet the time for completion requirements of the Contract. It shall include an allowance for anticipated delay caused by ordinary adverse weather conditions and shall provide for the expeditious and practical execution of the Work within the time requirements of the Contract Documents. The schedule shall set forth as much detail as deemed necessary by the Authority.
- (b) The Authority’s acceptance of the schedule is not a representation or agreement that the schedule is logical or can be performed in the time or sequence indicated, but only that the Authority approves of the construction in that time and in that sequence.

#### **Article 16: SHOP DRAWINGS, PRODUCT DATA and SAMPLES**

- (a) Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or any Subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.
- (b) Product Data are illustrations, standard schedules, performance charts, instruction, brochures, diagrams and other information furnished by the Contractor to illustrate a material, product or system for some portion of Work.
- (c) Samples are physical examples, which illustrate materials, equipment or workmanship and establish standards of quality and esthetics by which the Work will be judged.
- (d) The Contractor shall review, approve and submit, with reasonable promptness and in such sequence as to cause no delay in the Work or in the work of the Authority or any separate contractor, all Shop Drawings, Product Data and Samples required by the Contract Documents.
- (e) By preparing and submitting Shop Drawings, Product Data and Samples, the Contractor represents that it has determined and verified all materials, field measurements, and field construction criteria related thereto, or will do so, and that it has checked and coordinated the information contained within such submittals with the requirements of the Work and the Contract Documents.
- (f) The Contractor shall not be relieved of responsibility for any deviation from the requirements of the Contract Documents by the Engineer’s approval of Shop Drawings, Product Data or Samples unless the Contractor had specifically informed the Engineer in writing of such deviation at the time of submission and the Engineer has given written approval to the specific deviation. The Contractor shall not be relieved from responsibility of errors or omissions in the Shop Drawings, Product Data or Samples by the Engineer’s approval thereof.

- (g) **The Contractor shall direct specific attention, inviting or on resubmitted Shop Drawings, Product Data or Samples, to revisions other than those requested by the Engineer on previous submittals.**
- (h) **No portion of the Work requiring submission of a Shop Drawing, Product Data or Sample shall be commenced until the submittal has been approved by the Engineer. All such portions of the Work shall be in accordance with approved submittals.**

#### **Article 17: MATERIALS, SERVICES, AND FACILITIES**

- (a) **Materials and equipment shall be so stored as to insure the preservation of their quality and fitness for the work. Stored materials and equipment to be incorporated in the Work shall be located so as to facilitate prompt inspection.**
- (b) **Manufactured articles, materials, and equipment shall be stored, applied, installed, connected, erected, used, cleaned, and conditioned as directed by the manufacturer, and as approved by the Engineer.**
- (c) **Materials, supplies, and equipment shall be in accordance with samples, shop drawings, and catalogue cuts submitted by the Contractor and approved by the Engineer and Authority.**
- (d) **Materials, supplies, or equipment to be incorporated into the work shall not be purchased by the Contractor or the Subcontractor subject to a chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller.**
- (e) **All Work included in this Contract shall be performed to the standards specified. The Contractor shall employ no plant, equipment, materials, methods or persons to which the Engineer or the Authority reasonably objects, and shall remove no plant, equipment or other facilities from the site of the work without permission of the Engineer and the Authority. The Contractor's failure to comply with these requirements will constitute a breach of Contract and as such may result in a termination of the Contractor by the Authority.**

#### **Article 18: INSPECTION AND TESTING**

- (a) **All materials and equipment used in the construction of the Project shall be subject to adequate inspection and testing in accordance with generally accepted industry standards and the Legal Requirements as defined in the Contract Documents.**
- (b) **If the Contract Documents or the Legal Requirements require any part of the Work to specifically be inspected, tested or approved by someone other than the Contractor, the Contractor shall initiate and coordinate those inspections, test, or approvals with the proper authorities and shall give the Engineer and the Authority three (3) working days written notice of each such inspection. The Contractor shall then furnish the Engineer and the Authority with the required certificates of inspection, testing or approval. Unless otherwise specifically provided for, the Contractor shall bear all costs of such inspections, tests or approvals.**
- (c) **Inspection, test, or approvals by the Engineer or others will not relieve the Contractor from its obligations to perform the Work in accordance with the requirements of the Contract Documents.**
- (d) **The Authority, the Engineer and their representatives shall at all times have access to the Work. In addition, authorized representatives and agents of any participating federal, state or local agency shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records. All such records shall remain available and accessible during performance of the Contract and until three years from the date of Final Payment, or, in case of dispute, for a period of three years after resolution of the dispute, whichever is later. The Contractor shall provide proper facilities for such access and observation of the Work and also for any inspection or testing thereof.**
- (e) **If any work is covered without the approval of the Engineer contrary to requirements of the Contract Documents, it must, if requested by the Engineer or the Authority, be uncovered for its observation and then recovered at the Contractor's expense.**

- (f) If the Engineer or the Authority considers it necessary or advisable that approved covered work be inspected or tested by others, the Contractor, at the Engineer's or the Authority's request, shall uncover, expose or otherwise make that portion of the Work available for observation, inspection or testing as the Engineer or the Authority may require. If it is found that such work is defective, the Contractor will bear all the expenses of such uncovering, exposure, and observation as well as all expenses for the inspection, testing, and satisfactory reconstruction of that portion of the Work. If, however, such work is not found to be defective, the Contractor will be allowed an increase in the Contract Price or an extension of the Contract Time or both, directly attributable to such uncovering, exposure, observation, inspection, testing, and reconstruction, and an appropriate Change Order will be issued.

#### **Article 19: SUBSTITUTIONS**

- (a) After the Contract has been executed, the Authority and the Engineer will consider a written request for the substitution of products or materials specified by the Contract Documents. The Authority is not obligated to consider substitutions and such consideration is the Authority's sole discretion. By making requests for substitutions, the Contractor represents and certifies:
- (1) that the Contractor has personally investigated the proposed substitute product or material and determined that it is equal or superior in all respects to that specified by the Contract Documents.
  - (2) that the Contractor will provide the Authority with a warranty of the substituted product equal or superior to the warranty furnished in connection with the product or material originally specified by the Contract Documents.
  - (3) that the cost data presented is complete and includes all related costs under this Contract and Contractor waives all claims for any additional costs related to the substitution; and
  - (4) that the Contractor will coordinate the installation of the substituted product or material and that the Contractor will make all changes necessitated by the use of the substituted product without any additional cost to the Authority.

#### **Article 20: PATENTS**

The Contractor shall pay all applicable royalties and license fees. It shall defend all suits or claims for infringement of any patent rights and save the Authority harmless from loss on account thereof, except that the Authority will be responsible for any such loss when a particular process, design or the product of a particular manufacturer or manufacturers as specified is an infringement of a patent. However, if the Contractor has reason to believe that such particular process, design or product is an infringement, he shall be responsible for such loss unless he gives written notice to the Authority and the Engineer of the possible infringement.

#### **Article 21: SURVEYS, PERMITS, REGULATIONS**

- (a) The Authority will furnish all boundary surveys and establish all baselines for locating the principal component parts of the Work together with suitable number of benchmarks adjacent to the Work as shown in the Contract Documents.
- (b) Permits and licenses of a temporary nature necessary for the prosecution of the work, such as building, plumbing, and electrical permits, shall be secured and paid for by the Contractor unless otherwise stated in the Contract Documents. Permits, licenses, and easements for permanent use of structures or permanent changes in existing facilities shall be secured and paid for by the Authority unless otherwise specified.
- (c) The Contractor shall give all notices and comply with all permits and the Legal Requirements in the performance of the Work. The Contractor shall promptly notify the Engineer in writing if it comes to its attention that the Contract Documents are at variance with any such requirement.

- (d) If any permit, license or certificate expire, be revoked, terminated or suspended because of any act or omission of the Contractor, it shall not be entitled to any additional compensation for direct costs or to an extension of the Contract Time.
- (e) Permits obtained by the Authority for this Project are available for inspection in the Authority's offices.

#### **Article 22: PROTECTION OF WORK, PROPERTY AND PERSONS**

- (a) The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work, in compliance with industry standards and the Legal requirements. Contractor shall take all necessary precautions for the safety of and shall provide the necessary protection to prevent damage, injury or loss to all employees on the work and other persons who may be affected thereby, all the work and all materials or equipment to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation or replacement in the course of construction. In case of suspension of work for any cause whatever, the contractor shall be responsible for the Project and shall take such precautions as may be necessary to prevent damage to the Work, provide for proper drainage and shall erect any necessary temporary structures, signs, or other facilities at its expense. During such period or suspension of work, the Contractor shall properly and continuously maintain in acceptable growing condition all living material in newly established plantings, seedings, and sodding furnished under this Contract, and shall take adequate precautions to protect new growth and other important growth against injury. Contractor shall also notify owners of adjacent utilities when prosecution of the Work may affect them.
- (b) In emergencies affecting the safety of persons or the Work or property at the site or adjacent thereto, the Contractor shall act, at its discretion, to prevent threatened damage, injury or loss. Any additional compensation or extension of time claimed by the Contractor on account of emergency work shall be determined as provided in the Contract Documents.

#### **Article 23: SUPERVISION BY CONTRACTOR**

- (a) The Contractor shall supervise and direct the work. It shall be solely responsible for the means, methods, techniques, sequencers and procedures of construction. The Contractor shall employ and maintain on the work a qualified supervisor or superintendent ("Supervisor") and provide a resume of its experience. This Supervisor shall have been designated in writing as the Contractor's representative at the site and shall not thereafter be changed unless such change is approved by or directed by the Authority. The Authority shall have the right to approve this Supervisor or order its removal from the job site, which right shall not be unreasonably exercised. This Supervisor shall have full authority to act on behalf of the Contractor and all communications given to the Supervisor shall be as binding as if given to the Contractor. This Supervisor shall be present on the site at all times as required to perform adequate supervision, control and coordination of the Work as determined by the Engineer or the Authority.
- (b) The Contractor shall be responsible to the Authority for the acts and omissions of its employees, Subcontractors and their agents and employees, and other persons performing any of the Work under a contract with the Contractor.
- (c) The Contractor shall not be relieved from its obligations to perform the Work in accordance with the Contract Documents either by the activities or duties of the Engineer and the Authority in their administration of the Contract or by inspections, tests, or approvals required or performed by persons other than the Contractor.
- (d) Prior to commencing work, the Contractor shall check all work performed by others that is necessary for the execution of the Contractor's work and shall promptly report to the Engineer in writing any deficiencies in such work which render it unacceptable or unsuitable for the Contractor's Work or which will increase the cost of the Work. Failure to give such written notice shall relieve the Authority of any responsibility therefore. The Contractor shall be responsible for all elevations, grades, and proper fitting of its Work.

#### Article 24: CHANGES IN THE WORK

- (a) The Authority, without invalidating the Contract, may order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, with the Contract Sum and the Contract Time being adjusted accordingly. All such changes in Work shall be authorized by written Change Order signed by the Authority and the Engineer, and shall be performed under the applicable conditions of the Contract Documents.
- (b) The cost or credit to the Authority resulting from a change in the Work shall be determined in one or more of the following ways:
- (1) by mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
  - (2) by unit prices stated in the Contract Documents or subsequently agreed upon;
  - (3) by cost to be determined in a manner agreed upon by the parties and a combined overhead and profit of 15% of such costs if the Contractor performs the work with its own forces, or 15% for the combined overhead and profit of a Subcontractor performing the work with its own forces and 5% for the Contractor; in no event shall the total mark-up for overhead and profit exceed 20% of the cost; or
  - (4) by the method provided in Article 25(c).
- (c) If none of the methods set forth above is agreed upon, the Contractor, provided it receives a Construction Change Directive signed by the Authority, shall promptly proceed with the Work involved. The cost of such Work shall then be determined by the Engineer on the basis of the reasonable expenditures and savings of those performing the Work attributable to the change, including, in the case of an increase in the Contract Sum, a reasonable allowance for overhead and profit. In such case, and also under Article 25(b)(3) above, the Contractor shall keep and present, in such form as the Engineer may prescribe, an itemized accounting together with appropriate supporting data of the costs for inclusion in a Change Order. Unless otherwise provided in the Contract Documents, costs shall be limited to the following: cost of materials, including sales tax and cost of delivery,, cost of labor, including social security, unemployment insurance, and fringe benefits required by agreement or custom; workers' or workmen's compensation insurance; bond premiums; and rental value of equipment and machinery. The amount of credit to be allowed by the Contractor to the Authority for any deletion or change that results in a net decrease in the Contract Sum will be the amount of the actual net cost as confirmed by the Engineer. When both additions and credits covering related Work or substitutions are involved in any one change, the allowance for overhead and profit shall be figured on the basis of the net increase, if any, with respect to that change.
- (d) The Engineer or the Authority also may at any time by issuing a Field Order, make changes in the details of the Work. The Contractor shall proceed with the performance of any changes in the work so ordered and should the Contractor believe that such Field Order entitles it to a change in Contract Price or Time, or both, it shall give the Engineer and the Authority Written Notice thereof within ten days after the receipt of the Field Order. Failure to provide such written notice shall be deemed a waiver of any claims arising from or relating to the Field Order. Failure to proceed with work changed by a Field Order or a Change Order shall constitute a breach of contract and shall be cause for the termination of the Contract. All requests for a Change Order arising out of a Field Order must have a copy of the referenced Field Order attached.
- (e) Where the Work is contracted for on a unit price basis and the actual quantity of work for any pay item exceeds the estimated quantity by more than 25% of that amount stated in the Contract Documents, a Change Order will be issued for any increase or decrease in unit cost, which results from the increased work. If the quantity variation is such as to cause an increase in the time necessary for completion, the Authority shall, upon receipt of a written request for an extension of time, make an appropriate adjustment for extending the completion date in accordance with Article 26.

#### Article 25: CHANGES IN THE CONTRACT SUM OR OTHER RELIEF



- (a) **If the Contractor wants to make a claim for an increase in the Contract Sum, or for any other relief under the Contract, it shall give the Engineer and the Authority written notice of the claim within ten (10) days after the occurrence of the event giving rise to such claim. This notice shall be given by the Contractor before proceeding to execute any additional Work, except in an emergency endangering life or property. The notice shall set forth the basis for the claim and the relief or increase in the Contract Sum requested by the Contractor. After providing notice of its claim, Contractor shall provide the Authority and the Engineer with any information and/or documents requested by them to evaluate the claim. No such claim shall be valid unless so made. If the Authority and the Contractor cannot agree on the amount of the adjustment in the Contract Sum, it shall be determined by the Engineer in accordance with Article 40(e). Any change in the Contract Sum resulting from such claim shall be authorized by Change Order.**
- (b) **If the Contractor claims that additional cost is required because of, but not limited to,**
  - (1) **any written interpretation of the Contract Documents;**
  - (2) **any order by the Authority to stop the Work where the Contractor was not at fault; or**
  - (3) **any Field Order directed change in the Work; the Contractor shall make such claim as provided in Article 25(a).**

#### **Article 26: TIME FOR COMPLETION AND LIQUIDATED DAMAGES**

- (a) **All time limits stated in the Contract Documents are of the essence of the Contract.**
- (b) **The Contractor shall proceed with the Work with the diligence necessary to insure Substantial Completion within the Contract Time. It is expressly understood and agreed by and between the Contractor and the Authority that the Contract Time for the completion of the Work described herein is a reasonable and adequate time, taking into consideration the average climate and economic conditions and other factors prevailing in the locality of the Work.**
- (c) **If the Contractor shall fail to Substantially Complete the Work within the Contract Time, or extension of time granted by the Authority, then the Contractor shall pay to the Authority liquidated damages as specified in the Contract Documents for each calendar day after the date of Substantial Completion until the Work achieves Substantial Completion. Contractor agrees that the amount of liquidated damages is reasonable and waives any right it may have to contest the amount of liquidated damages as being unreasonable or a penalty. If liquidated damages are not set forth in the Contract Documents, Contractor shall be liable to Owner for any loss or damage arising from the Contractor's failure to complete the Work by the date of Substantial Completion.**
- (d) **If the Contractor is delayed at any time in the progress of the Work by any act or neglect of the Authority or the Engineer, or by any employee of either, or by any separate contractor employed by the Authority, or by changes ordered in the Work, or by labor disputes, fire, unusual delay in transportation, unusual and adverse weather conditions that could not be reasonably anticipated, unavoidable casualties, or any causes beyond the Contractor's control, or by delay authorized by the Authority, then the Contract Time shall be extended by Change Order for such reasonable time as the Engineer may determine.**
- (e) **Any claim for extension of time shall be made in writing to the Engineer and the Authority within (10) days after the commencement of the event giving rise to or causing the claimed delay; otherwise it shall be waived. The notice shall set forth the basis for the extension of time and any other relief requested by the Contractor. After providing notice of its claim, Contractor shall provide the Authority and the Engineer with any information and/or documents requested by them to evaluate the claim. In the case of a continuing delay only one notice of claim is necessary. The Contractor shall precisely identify the delay and its cause, and provide an estimate of the probable effect of such delay on the progress of the Work.**
- (f) **Contractor hereby expressly waives any claims against the Authority and the Engineer for any indirect or direct damages, costs or expenses which the Contractor or its Subcontractors may incur as a result of any delay in the performance of the Contract, except and then only to the extent that**

the delay is caused by any act or omission of the Authority or the Engineer, or their agents or employees, and is due to causes within their control. In such event, Contractor may seek direct costs arising solely from the delay but shall not be entitled to any indirect costs including, without limitation, home office overhead costs. It is understood and agreed that the Contractor's sole and exclusive remedy in case of any noncompensable delay shall be an extension of the Contract Time, but only as determined in accordance with the provisions of the Contract Documents.

- (g) In the event that Contractor has incurred a delay for which it believes it is entitled to compensation under this Contract, it shall give the Authority written notice of that claim within ten (10) days of the commencement of the delay, and shall identify what it considers to be the cause of and expected duration of the delay.

#### **Article 27: CORRECTION OF WORK**

- (a) The Contractor shall promptly remove from the premises all work rejected by the Engineer or the Authority for failure to comply with the Contract Documents whether incorporated in the construction or not, and the Contractor shall promptly replace and re-execute the work in accordance with the Contract Documents and without expense to the Authority and shall bear the expense of making good all work of other Contractors destroyed or damaged by such removal or replacement.
- (b) Unauthorized work shall be any work done or materials ordered by the Contractor prior to receipt of the Notice to Proceed, previously rejected work incorporated into the Project, work done contrary to or regardless of the instructions of the Engineer, extra work performed without proper written authority, work done beyond the limits shown on the Plans, except as herein specified, any extra work done without written authority from the Engineer or the Authority, or any work done after discovery of a discrepancy, ambiguity, or inconsistency and before the Engineer provides any necessary instructions to the Contractor. The Authority shall not pay for unauthorized work. Unauthorized work may, at the Authority's sole discretion, be ordered removed or replaced at the Contractor's expense.

#### **Article 28: SUSPENSION OF WORK; THE AUTHORITY'S RIGHT TO STOP AND CARRY OUT THE WORK**

- (a) The Authority may order the Contractor in writing to suspend, delay, or interrupt all or any part of the Work for such period of time as it may determine to be appropriate for the convenience of the Authority.

- (b) **The Authority's Right to Stop the Work**

If the Contractor fails to correct defective Work as required, fails to carry out the Work in accordance with the Contract Documents, or if an emergency situation exists that threatens the safety of persons or property, the Authority, in addition to any other remedies it may have, by a written notice direct the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated. Contractor shall be liable to the Authority for any loss of damages arising from the stoppage of the Work including, without limitation, any loss or damage arising from a delay in the completion of the Work.

- (c) **Authority's Right to Carry Out the Work**

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within two (2) days after receipt of written notice from the Authority to commence and continue correction for such default or neglect with diligence and promptness, the Authority may, after two (2) days following receipt by the Contractor of an additional written notice of its decision to do so, make good such deficiencies without prejudice to any other remedy it may have. In such case an appropriate Change Order shall be issued deducting from the payments then or thereafter due the Contractor the cost of correcting such deficiencies, including compensation for the Engineer's additional services or other services as may be required and made necessary by such default, neglect or failure. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Authority. All charges and back charges made against monies otherwise owed to or due to the Contractor shall be deemed accepted

unless the Contractor rejects them in writing to the Authority within ten (10) days of receipt and states fully its reasons for rejecting them.

#### **Article 29: TERMINATION**

- (a) **If the Contractor is adjudged a bankrupt or insolvent, or if it makes a general assignment for the benefit of its creditors, or if a trustee or receiver is appointed for the Contractor or for any of its property, or if it files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or if it fails to supply sufficient skilled workmen or suitable materials or equipment, or if it fails to make prompt payments to subcontractors or for labor, materials or equipment, or if it refuses or fails to prosecute the Work or any separable part thereof, with such diligence as will insure its completion within the Contract Time, or if it fails to complete the Work within the Contract Time required, or if it disregards laws, ordinances, rules, regulations, directions or orders of any public body having jurisdiction over the Work, or if it disregards the authority of the Engineer, or if it otherwise violates any provision of the Contract Documents, then the Authority may, without prejudice to any other right or remedy, seven (7) days after delivery of a written notice to the Contractor and its surety, terminate the services of the Contractor and take possession of the Project and of all materials, equipment, tools, construction equipment and machinery thereon owned by the Contractor, and finish the Work by whatever method it may deem expedient. In such case, the Contractor will not be entitled to receive any future payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the direct and indirect costs of completing the Project, including compensation for additional professional services, such excess will be paid to the Contractor. If such costs exceed such unpaid balance, the Contractor shall pay the difference to the Authority. Such cost incurred by the Authority will be determined by the Engineer and incorporated in a Change Order.**
- (b) **If termination for cause by the Authority is deemed to be improper, it shall be deemed a termination for convenience.**
- (c) **Where the Contractor's services have been so terminated by the Authority, the termination shall not affect any rights the Authority then has or that may thereafter accrue against the Contractor. Any retention or payment of monies by the Authority due the Contractor will not release the contractor from compliance with the Contract Documents.**
- (d) **Termination for Convenience**

**The Authority may, effective not less than after seven (7) days from delivery of a written notice to the Contractor, without cause and without prejudice to any other rights or remedies it may have, terminate this Construction Contract for its own convenience for any reason. When this Construction Contract has been terminated for convenience, the Contractor shall be paid only for Work performed through the date of termination. The Contractor shall not be entitled to anticipated profits on unperformed portions of the Work.**

#### **Article 30: USE OF THE PREMISES**

- (a) **The Authority will have the right to enter the premises for the purpose of doing work not covered by the Contract Documents. This provision shall not be construed as relieving the Contractor of the sole responsibility for the care and protection of the Work or the restoration of any damaged work, except such as may be caused by agents or employees of the Authority.**
- (b) **Prior to Substantial Completion, the Authority, with the concurrence of the Contractor, may use any completed or substantially completed portion of the Work. Such use shall not constitute a final acceptance of such portions of the Work unless otherwise stated so in writing.**

#### **Article 31: PAYMENTS TO THE CONTRACTOR**

- (a) **Prior to submitting its first application for payment, the Contractor shall submit to the Authority and the Engineer a schedule of values allocating the costs of the various portions of the Work, prepared in such form and supported by such data to substantiate its accuracy as may be required by the Authority and the Engineer. This schedule, as approved, shall be used as a basis for**

Contractor's applications for payment, which shall be submitted on the current edition of the AIA Application and Certification for Payment ("Application for Payment"), AIA Document G702.

- (b) At least twenty days before each progress payment falls due (but not more than once a month), the Contractor, the Engineer, and the Authority shall meet at the Project to determine the percentage of completion of the individual items in the schedule of values. If no agreement is reached, the Contractor shall prepare its Application for Payment using percentages it considers correct. Thereafter, the Contractor shall submit to the Engineer three (3) copies of its completed and signed Applications for Payment covering the work performed during the period of the Application for Payment and supported by such data as the Engineer may reasonably require. If payment is requested on the basis of materials and equipment not incorporated in the Work, the Application for Payment shall also be accompanied by such supporting data, satisfactory to the Engineer, as will protect the Authority's interests therein, including applicable insurance. See Article 32(c). The Engineer will, within fifteen days after receipt of each Application for Payment, either certify in writing its approval of payment for an amount based either on the agreed percentages of completion or the percentages the Engineer considers correct and present the Application for Payment to the Authority, or return the Application for Payment to the contractor stating in writing its reasons for refusing to approve payment. If payment has been refused, the Contractor may make the necessary corrections and resubmit the Application for Payment to the Engineer. The Authority will, within thirty days of its receipt of an approved Application for Payment, pay the Contractor a progress payment in the amount certified by the engineer, unless the Authority has reason to refuse payment of that amount in whole or in part, in which event it shall state its reasons in writing to the Contractor. The Authority will retain five (5) percent of the amount of each payment due until final completion and acceptance of all work. However, the Authority may, in its sole discretion, reduce the amount retained to 150% of the value of work remaining when the work is substantially complete. The decision to reduce retainage and the amount of such reduction shall be solely that of the Authority. On completion and acceptance of a part of the Work on which the price is stated separately in the Contract Documents, payment may be made in full, including retained percentages less authorized deductions. Prior to receiving each payment, and as part of its Applications for Payment, the Contractor shall certify in writing that it has made payment from the proceeds of prior payments and that it will make timely payments from the proceeds of progress and final payment then due it, to its subcontractors and suppliers in accordance with its contractual arrangement with them. If requested by the Authority, the Contractor shall provide evidence of such payments, including affidavits by subcontractors and suppliers.
- (c) The Application for Payment may also include an allowance for the cost of major materials and equipment not yet incorporated in the Work. When requested in writing by the Contractor and approved in writing by the Authority, payment will be made for nonperishable major material and equipment delivered and properly stored at the Work site or other approved site. Material for which payment has been made, wholly or partially, shall not be removed from the Work site or other approved site unless authorized by the Authority in writing.
- (d) The Contractor shall indemnify and save the Authority and its agents harmless from all losses, damages, liabilities, including attorney's fees, arising out of the demands of Subcontractors, laborers, workmen, mechanics, materialmen and furnishers of machinery parts thereof, equipment, tools, and all supplies incurred in the furtherance of the performance of the Work. The Contractor shall, at the Engineer's request, furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged, or waived. If the Contractor fails to do so, the Authority may, after having notified the Contractor, either pay unpaid bills or withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the Contractor will be resumed in accordance with the terms of the Contract Documents. In no event, however, shall the provisions of the foregoing sentence be construed to impose any obligations upon the Authority to either the Contractor, its Surety, or any third party. In paying any unpaid bills of the Contractor, any payment so made by the Authority will be considered as a payment made under the Contract Documents by the Authority to the Contractor and the Authority will not be liable to the Contractor for any such payments in good faith.
- (e) If the Authority fails to make a payment when due under the terms of this Contract, interest shall accrue on monies due and owing at the rate of 3% per annum commencing sixty (60) days after the date the payment was due.

- (f) The Authority may reduce in whole or in part any approved Application for Payment, whether or not it has been paid, to the extent necessary to protect the Authority from loss because of:
- (1) defective Work not remedied;
  - (2) failure to timely or properly pay Subcontractors;
  - (3) evidence that the Work cannot be completed for the amount remaining to be paid; or
  - (4) damage to the Authority;
  - (5) a persistent failure to carry out the Work in accordance with the Contract Documents.

#### **Article 32: SUBSTANTIAL COMPLETION OF THE WORK**

- (a) When the Contractor considers that the Work or, if agreed to by the Authority, a designated portion thereof is Substantially Complete as defined in Article 1, the Contractor shall prepare for submission to the Engineer a list of items to be completed or corrected. The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. When the Engineer on the basis of its inspection determines that the Work or designated portion thereof is Substantially Complete, it will then prepare a Certificate of Substantial Completion which shall establish the Date of Substantial Completion, shall state the responsibilities of the Authority and the Contractor for security, maintenance, heat, utilities, damage to the Work, and insurance, and shall fix the time within which the Contractor shall complete the items listed therein. Warranties required by the Contract Documents shall commence on the Date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion. The Certificate of Substantial Completion shall be submitted to the Authority and the Contractor for their written acceptance of the responsibilities assigned to them in such Certificate.
- (b) Upon Substantial Completion of the Work or designated portion thereof and upon application by the Contractor and certification by the Engineer, the Authority shall make payment, reflecting adjustment in retainage, if any, for such Work or portion thereof, as provided in the Contract Documents.

#### **Article 33: FINAL COMPLETION AND FINAL PAYMENT**

- (a) Upon receipt of written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Engineer will promptly make such inspection and, when it finds the Work acceptable under the Contract Documents and the Contract fully performed, it will promptly issue a final Certificate for Payment stating that to the best of its knowledge, information, and belief, and on the basis of its observations and inspections, the Work has been completed in accordance with the terms and conditions of the Contract Documents and that the entire balance stated therein is due and payable to the Contractor. If the Contractor has completed all of the requirements and conditions, Final Payment shall be made within 30 days of receipt of the Contractor's Application. The Engineer's Final Certificate for Payment will constitute a further representation that the conditions precedent to the Contractor's being entitled to final payment as set forth in Article 32(b) have been fulfilled.
- (b) Neither the final payment nor the remaining retained percentage shall become due until the Contractor submits to the Engineer (1) an affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Authority or its property might in any way be responsible, have been paid or otherwise satisfied, (2) consent of surety, if any, to final payment, (3) if required by the Authority, other data establishing payment or satisfaction of all such obligations, such as receipts, release and waivers of liens arising out of the Contract, to the extent and in such form as may be designated by the Authority, (4) two (2) binders containing all product and equipment manuals, warranties and guarantees, and (5) as-built drawings. If any Subcontractor refuses to furnish a release or waiver required by the Authority, the Contractor may furnish a bond satisfactory to the Authority to indemnify it against any such lien. If any such lien remains unsatisfied after all payments are made, the Contractor shall refund to the Authority all

monies that the latter may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

- (c) **If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by the issuance of Change Orders affecting final completion, and the Engineer so confirms, the Authority shall, upon application by the Contractor and certification by the Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance of the Contract Sum is less than the retainage stipulated in the Contract Documents, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Engineer prior to certification of such payment. Such payment shall then be made under the terms and conditions governing final payment. However, that payment shall not constitute a waiver of any claims the Authority may then or thereafter have.**
- (d) **The acceptance of final payment shall constitute a waiver of all claims by the Contractor except those previously made in writing, properly reserved pursuant to these General Conditions, and identified by the Contractor as unsettled at the time of the final Application for Payment. Such contractual claims, whether form money or other relief, shall be submitted in writing not later than 60 days after final payment. The Authority's Capital Programs Director shall review such contractual claims and issue a final decision in writing within 90 days after receipt.**

#### **Article 34: INSURANCE**

(a) **Contractor's Liability Insurance**

**The Contractor shall purchase and maintain such insurance as will protect it from claims set forth below which may arise out of or result from the Contractor's operations under the Contract, whether such operations be by itself or by any Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:**

- (1) **claims under workers' or workmen's compensation, disability benefit and other similar employee benefit acts;**
- (2) **claims for damages because of bodily injury, occupational sickness or disease, or death of its employees;**
- (3) **claims for damages because of bodily injury, sickness or disease, or death of any person other than its employees;**
- (4) **claims for damages insured by usual personal injury liability coverage, which are sustained (1) by any person as a result of an offense directly or indirectly related to the employment of such person by the Contractor, or (2) by any other person;**
- (5) **claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting there from; and**
- (6) **claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.**

**Liability insurance shall include all major divisions of coverage and be on a comprehensive basis including:**

- (1) **Premises Operations (including X, C and U coverage);**
- (2) **Independent Contractor's Protective;**
- (3) **Products and Completed Operations;**
- (4) **Personal Injury Liability with Employment Exclusions deleted;**
- (5) **Contractual, including provisions for indemnity obligations under this Agreement;**

- (6) Owned, non-owned and hired motor vehicles;
- (7) Broad Form Property Damage including Completed Operation

Contractor shall have and maintain the following insurance in the amounts set forth below unless otherwise agreed to by the Owner in writing:

- (1) Workers' Compensation Insurance in an amount as required by state law. Workers' Compensation per statutory limits and employer's liability in the following minimum amounts: EL Each Accident - \$500,000, EL Disease Policy Limit - \$500,000, EL Disease Each Employee - \$500,000.
- (2) Commercial General Liability Insurance including coverage for bodily injury, property damage, contractual liability and products/completed operations with a minimum coverage of \$1,000,000 per occurrence and \$2,000,000 in the aggregate. Property damage coverage shall include coverage for explosion, collapse and underground hazards. Coverage for products/completed operations shall extend for a period of three (3) years after the date of substantial completion. Property damage in the amount of not less than \$1,000,000 for any one accident. Additional limits may be required.
- (3) Comprehensive Automobile Liability Insurance for bodily injury and property damage with a minimum coverage of \$1,000,000 per occurrence and \$1,000,000 in the aggregate.
- (4) Excess or Umbrella insurance supplementing coverage under the Commercial General Liability, Comprehensive Automobile Liability Insurance and Employer's Liability Insurance policies with a minimum coverage of \$1,000,000 per occurrence and \$1,000,000 in the aggregate

The Contractor shall endorse the Authority on its insurance policy as an additional insured to protect the interests of the public. Certificates of Insurance and Additional Insured Endorsements acceptable to the Authority shall be filed with the Authority prior to commencement of the Work. These Certificates and Endorsements shall contain a provision that coverages afforded under the policies will not be cancelled until at least thirty days prior written notice has been given to the Authority. Insurance certificates must include an additional insured endorsement naming the following as an additional insured: "The Northern Virginia Regional Park Authority, its officers, directors, agents, employees, and volunteers." The endorsement must be completed on endorsement form CG 20 10 11 85 or CG 20 10 07 04 or such other form acceptable to the Authority.

(b) The Authority's Liability Insurance

The Authority shall be responsible for purchasing and maintaining its own liability insurance and, at its option, may purchase and maintain such insurance as will protect it against claims that may arise from operations under the Contract.

(c) Property Insurance

Unless otherwise provided, the Authority shall purchase and maintain property insurance upon the entire Work at the site to the full insurable value thereof. This insurance shall include the interests of the Authority, the Contractor, Subcontractors, and Sub-subcontractors in the Work and shall insure against the perils of fire and extended coverage and shall include "all risk" insurance for physical loss or damage including, without duplication of coverage, theft, vandalism and malicious mischief. If the Authority does not intend to purchase such insurance for the full insurable value of the entire Work, it shall inform the Contractor in writing prior to commencement of the Work. The Contractor may then affect insurance that will protect the interests of itself, its Subcontractors and Sub-subcontractors in the Work, and by appropriate Change Order the cost thereof shall be charged to the Authority. If not covered under the all risk insurance or otherwise provided in the Contract Documents, the Contractor shall effect and maintain similar property insurance on portions of the

**Work stored off the site or in transit when such portions of the Work are to be included in an Application for Payment.**

- (d) The Authority shall purchase and maintain such boiler and machinery insurance as may be required by the Contract Documents or by law. This insurance shall include the interests of the Authority, the Contractor, Subcontractor and Sub-subcontractors in the Work**
- (e) Any loss insured under Article 34(c) is to be adjusted with the Authority and made payable to the Authority as trustee for the insured's, as their interests may appear. The Contractor shall pay each Subcontractor a just share of any insurance monies received by the Contractor, and by appropriate agreement, written where legally required for validity, shall require each Subcontractor to make payments to its Sub-subcontractors in similar manner.**
- (f) If the Contractor requests in writing that insurance for risks other than those described in Article 34(c) or (d) or other special hazards be included in the property insurance policy, the Authority may, if possible and in its sole discretion, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order.**
- (g) The Authority and the Contractor waive all rights against (1) each other and the Subcontractors, Sub-subcontractors, agents and employees each of the other, and (2) the Engineer and separate contractors, if any, and their subcontractors, sub-contractors, agents and employees, for damages caused by fire or other perils to the extent covered by insurance obtained pursuant to Article 34(c) or (d) or any other property insurance applicable to the Work, except such rights as they may have to the proceeds of such insurance held by the Engineer as trustee. The foregoing waiver afforded the Engineer, its agents and employees shall not extend to the liability imposed by Article 36(a). The Authority or the Contractor, as appropriate, shall require of the Engineer, separate contractors, Subcontractors and Sub-subcontractors by appropriate agreements, written where legally required for validity, similar waivers each in favor of all other parties enumerated in this Article 34(g).**
- (h) If required in writing by the Contractor, the Authority as trustee shall, upon the occurrence of an insured loss, deposit in a separate account any money so received, and shall distribute it in accordance with the interests of the parties. If after such loss no other special agreement is made, replacement of damaged work shall be covered by an appropriate Change Order.**
- (i) The Authority as trustee shall have power to adjust and settle any loss with the insurers.**
- (j) If the Authority finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion thereof, such occupancy or use shall not commence prior to a time mutually agreed to by the Authority and the Contractor and to which the insurance company or companies providing the property insurance have consented by endorsement to the policy or policies. This insurance shall not be cancelled or lapsed on account of such partial occupancy or use. Consent of the Contractor and of the insurance company or companies to such occupancy or use shall not be unreasonably withheld.**



### **Article 35: ASSIGNMENTS**

Neither the Contractor nor the Authority shall sell, transfer, assign, or otherwise dispose of the Contract or any portion thereof, or of its rights, title, or interest therein, or its obligations thereunder, without written consent of both parties.

### **Article 36: INDEMNIFICATION**

- (a) To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Authority, the Engineer and their agents, officers, directors and employees from and against all claims, damages, losses and expense, including but not limited to attorney's fees, arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom and (2) is caused in whole or in part by any negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity that would otherwise exist as to any party or person described in this Article.
- (b) In any and all claims against the Authority or the Engineer or any of their agents or employees by any employee of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone whose acts any of them may be liable, the indemnification obligation under this Article shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under workers' or workmen's compensation acts, disability benefit acts or other employee benefit act.
- (c) The Authority shall retain such monies due or to become due the Contractor under the Contract as considered necessary by the Authority until such suits, claims for damages costs or losses have been settled or otherwise disposed of or satisfactory evidence to that effect has been furnished to the Authority.

### **Article 37: CONTRACTOR LIABILITY**

The Contractor shall be liable to Authority for all costs the Authority incurs as a result of the Contractor's failure to perform this Contract in accordance with its terms. The Contractor's failure to perform shall include the failure of its suppliers and or Subcontractors of any tier to perform. Contractor's liability shall include, but not be limited to, (1) damages, liquidated damages, and other delay costs payable to the Authority; (2) the Authority's increased costs of performance, such as extended overhead and increased performance costs resulting from Contractor-caused delays, improper Contractor work, or termination of the Contractor; (3) warranty and rework costs; (4) liability to third parties; (5) excess costs; and (6) attorney's fees and related costs.

### **Article 38: SEPARATE CONTRACTS**

- (a) The Authority reserves the right to let other contracts in connection with this Project. The Contractor shall afford other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work and shall properly connect and coordinate its work with theirs. If the proper execution or results of any part of the Contractor's work depends upon the work of any other contractor, the Contractor shall inspect and promptly report to the Engineer any defects in such work that render it unsuitable for such proper execution and results. The commencement of work by the Contractor shall indicate an acceptance of the previous contractor's work.
- (b) The Authority may perform additional work related to the Project by itself, or it may let other contracts containing provisions similar to these. The Contractor shall afford the other contractors who are parties to such contracts, the Authority, if it is performing the additional work itself, reasonable opportunity for the introduction and storage of materials and equipment and the execution of work and shall properly connect and coordinate it Work with theirs.

- (c) If the performance of additional work by other contractors or the Authority is not specified in the Contract Documents prior to the execution of the Contract, Written Notice thereof shall be given to the Contractor prior to starting any such additional work. If the Contractor believes that the performance of such additional work by the Authority or others will result in additional expense to the Contractor or entitle it to an extension of the Contract Time, it may make a claim therefore as provided in Articles 25, 26 and 27.

#### **Article 39: SUBCONTRACTING**

- (a) The Contractor may utilize the services of Subcontractors – which will have been approved by the Authority prior to commencement of the work – on those parts of the Work that, under normal contracting practices are performed by Subcontractors. The Contractor shall submit a list of proposed Subcontractors prior to commencement of the Work for the Authority’s review and approval. The Contractor shall not employ a Subcontractor to which the Authority may object. The Authority shall not withhold its approval unreasonably.
- (b) The Contractor shall not award work to a single Subcontractors in excess of 50 percent of the Contract Price without prior written approval of the Authority.
- (c) The Contractor shall be fully responsible to the Authority for the acts and omissions of its Subcontractors and of persons either directly or indirectly employed by them, as it is for the acts and omissions of person directly employed by it. The Contractor shall be fully responsible for the coordination of the work of the trades, Subcontractors and suppliers, and their officers, agents and employees.
- (d) By an appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by the terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities that the Contractor, by the Contract Documents, assumes toward the Authority and the Engineer. The agreement shall preserve and protect the rights of the Authority and the Engineer under the Contract Documents with respect to the Work to be performed by the Subcontractor so that the subcontracting thereof will not prejudice such rights, and shall allow the Subcontractor, unless specifically provided otherwise in the Contractor-Subcontractor agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by these Documents, has against the Authority. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with its Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the Subcontract, copies of the Contract Documents to which the Subcontractor will be bound by this Paragraph and identify to the Subcontractor any terms and conditions of the proposed Subcontract that may be at variance with the Contract Documents. Each Subcontractor shall similarly make copies of such Documents available to its Sub-subcontractors.
- (e) Nothing contained in the Contract Documents shall create any contractual arrangement between any Subcontractor and the Authority.
- (f) Within seven (7) days after receipt of amounts paid to it, contractor shall either:
- (1) Pay its subcontractors for the proportionate share of the total payment received attributable to the work performed by the subcontractor under the contract; or
  - (2) Notify the Authority and subcontractor in writing of his intentions to withhold all or part of the subcontractor’s payment with the reasons for the nonpayment.
- (g) Contractor shall include in each of its subcontracts a provision requiring each subcontractor to include or otherwise be subject to the same payment and interest requirements with respect to each lower-tier subcontractor that the contractor is subject to in subparagraph (f) and Article 32(e).

#### **Article 40: ENGINEER**

- (a) **The Engineer will act as the Authority's representative during the construction period and until final payment.**
- (b) **The Engineer will visit the site at intervals appropriate to the stage of construction to familiarize itself and determine in general if the work is proceeding in accordance with the Contract Documents. However, the Engineer will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. On the basis of its on-site observations, it will keep the Authority informed of the progress of the Work, and will endeavor to guard the Authority against defects and deficiencies in the Work of the Contractor.**
- (c) **The Engineer will not be responsible for and will not have control or charge of construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, and it will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The Engineer will not be responsible for or have control or charge over the acts or omissions of the Contractor, Subcontractors, or any of their agents or employees, or any other persons performing any of the Work. This Article shall in no way change the Engineer's responsibilities or liability to Authority.**
- (d) **The Engineer will render interpretations necessary for the proper execution or progress of the Work, with reasonable promptness and in accordance with any time limit agreed upon. Either party to the Contract may make a written request to the Engineer for such interpretations.**
- (e) **Claims, disputes, and other matters in question between the Contractor and the Authority relating to the execution or progress of the Work or the interpretation of the Contract Documents shall be referred initially to the Engineer for decision, which it will render in writing within a reasonable time. Unless the Contractor provides written notice to the Authority and the Engineer of any objection to the Engineer's decision, the Engineer's decision shall be final and binding.**
- (f) **All interpretations and decisions of the Engineer shall be consistent with the intent of and reasonably inferable from the Contract Documents and will be in writing or in the form of drawings. The Engineer will endeavor to secure faithful performance by both the Authority and The Contractor, will not show partiality to either, and will not be liable for the result of any interpretation or decision rendered in good faith in such capacity.**
- (g) **The Engineer's decisions in matters relating to artistic effect will be final if consistent with the intent of the Contract Documents and agreed to by the Authority.**
- (h) **The parties agree to perform the Work, accept the interpretation or otherwise follow the decision of the Engineer so as to not delay the progress of the Work. Notwithstanding this provision, the Authority may stop the Work pending a judicial review of the Engineer's decision.**
- (i) **The Engineer will have authority to reject Work, which does not conform to the Contract Documents.**
- (j) **The Engineer will review and approve or take other appropriate action upon the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for conformance with the design concept of the Work and with the information given in the Contract Documents. Such action shall be taken with reasonable promptness so as to cause no delay. The Engineer's approval of a specific item shall not indicate approval of an assembly of which the item is a component.**
- (k) **The Engineer will conduct inspections to determine the dates of Substantial Completion and final completion, will receive and forward to the Authority for the Authority's review written warranties and related documents required by the Contract and assembled by the Contractor, and will issue a final Certificate for Payment upon compliance with the requirements of Article 34.**
- (l) **Notwithstanding any other provision to the contrary, Article 40(e) to (h) shall not apply to this project if there IS no Project Engineer.**

**Article 41: WARRANTY**

- (a) The Contractor warrants to the Authority and the Engineer that all materials and equipment furnished under this Contract will be new unless otherwise specified and that all Work will be performed in a good and workmanlike manner and will be of good quality, free from faults and defects and in conformance with the Contract Documents and the Legal Requirements. All Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. If required by the Engineer, the Contractor shall furnish satisfactory evidence of the kind and quality of materials and equipment.
- (b) The Contractor shall promptly correct all Work rejected by the Engineer as defective or as failing to conform to the Contract Documents whether observed before or after substantial Completion and whether or not fabricated, installed, or completed. The Contractor shall bar all costs of correcting such rejected Work, including compensation for the Engineer's additional services made necessary thereby.
- (c) If, within one year after the Date of Substantial Completion of the Work or designated portion thereof or within one year after acceptance by the Authority of designated equipment or within such longer period of time as may be prescribed by law or by the terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be defective or not in accordance with the Contract Documents, the Contractor shall correct it promptly after receipt of a written notice from the Authority to do so unless the Authority has previously given the Contractor a written acceptance of such condition. This obligation shall survive termination of the Contract. The Authority shall give such notice promptly after discovery of the condition.

#### **Article 42: CONTRACTUAL DISPUTES**

Contractual claims, whether for money or for other relief, shall be submitted in writing not later than (60) sixty days after final payment; however, written notice of the Contractor's intention to file such claim must be given at the time of the occurrence or beginning of the work upon which the claim is based. A written decision upon any such claims will be made by the Authority within thirty (30) days after submittal. The Contractor may not institute legal action prior to receipt of the Authority's decision on the claim unless it fails to render such decision within 120 days. The decision of the Capital Programs Director or other signatory on the Contract shall be final and conclusive unless the Contractor within six (6) months of the date of the final decision on a claim, initiates legal action as provided in § 2.2-4364 of the Code of Virginia. Failure of the Authority to render a decision within 120 days shall not result in the Contractor being awarded the relief claimed nor shall it result in any other relief or penalty. The sole result of the Authority's failure to render a decision within the time allotted shall be the Contractor's right to immediately institute legal action. No administrative appeals procedure pursuant to § 2.2-4365 of the Code of Virginia has established for contractual claims under this Contract.

Revised 1/10/18

## Woodlands at Algonkian – Solar Feasibility Study

Date: 12/5/2022

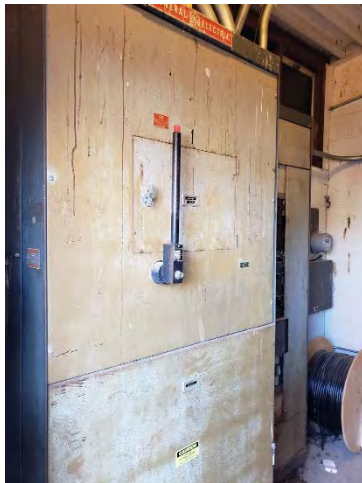
Project Title: NOVA Parks – Algonkian Solar Feasibility Study

Henry Adams Project No.: 22-N013

Site Observation Time and Date: 11/7/2022, 9:00am – 10:30am

### Electric Service and Distribution

Electric service is provided to the site by Dominion Virginia Power. A 208Y/120V, 3-phase, 4-wire, 1200-amp service disconnect switch and main distribution panel, MDP, are located in the main electrical room in the northwest corner of the building. There is no date on the equipment. Both the disconnect and the distribution panel are in poor condition, showing rust and general aging.



*E-1: Electric Service Disconnect*



*E-2: Existing Panel MDP and Meter*

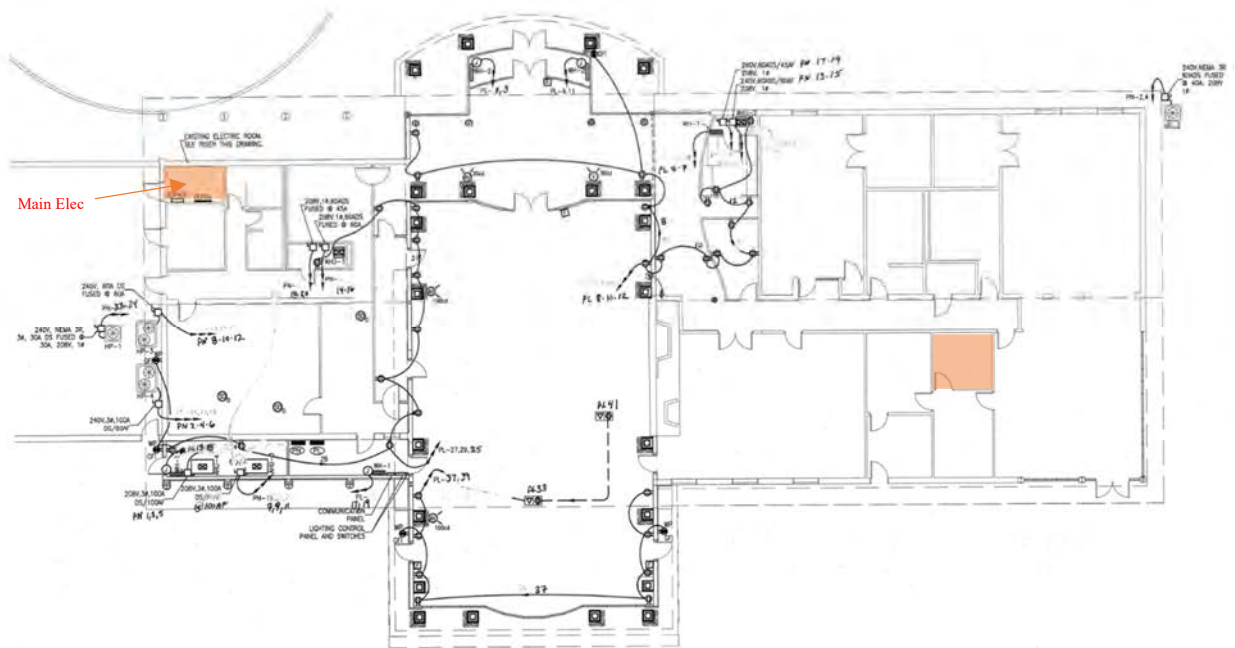
Panel MDP is a 208Y/120V, 3-phase, 4-wire, 1200-amp distribution panel. It serves pumps, outdoor mechanical units, the cart shed, branch circuit panels throughout the building, and several unlabeled loads. There are no spares, and all circuit breakers appear to be in the ON position. This potentially means there are no spares to use for connection to a photovoltaic system. Drawings from the 2006 project indicate the load on the service is 880-amperes, which provides flexibility for the addition of a PV array.

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Dominion Virginia Power requires a photovoltaic array be connected to the main service panel. Even though there is a smaller branch panelboard in the eastern electrical room with spare capacity, it cannot be used to meet Dominion requirements. The intent of connecting to the service equipment is to ensure the customer will have a reliable source of energy from the grid when the photovoltaic array is not producing energy. The standard building meter in the main electrical room would need to be replaced with a bi-directional meter to track energy delivered from Dominion versus what the solar array would deliver back to the grid.



E-3: Electrical Room Locations

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### Roof Analysis

Overall

The building has standing seam metal roofs.

- Standing seam roofs are ideal for solar panels because the panels can be mounted to the seams using clips instead of requiring fasteners that penetrate the roof.
- Depending on when the roof was last replaced, solar is also advantageous for standing seam roofs. A solar system typical lifespan is 20-25 years, while standing seam roofs can last 40 years or more.
- Below is an analysis of each roof, indicating the pros/cons and existing challenges from trees and roof elements.



*E-4: General Roof Layout*

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**Roof 1**

- The lower portion of this roof was in shadow during the morning visit.
- There are 3 tall trees directly south (in front) of the roof and additional trees at the southeast corner. The corner tree shadowing would end later in the morning. The central tree shadow would shift along the lower section of the roof throughout the day.
- The upper portion of the roof is fairly open to sun exposure. One mechanical exhaust hood is located near the top. The west portion of the roof would be in shadow in the afternoon/evening hours from the taller middle building.



*E-5: Roof 1 – West*



*E-6: Roof 1 – East*

**Roof 2**

- In the morning hours, this roof is exposed to direct sunlight.
- There are some mechanical exhaust hoods in the middle of the roof that cause minimal shading and would limit the number of panels on this roof.
- The east side of the roof is ideal. The west side would have some shadowing from the taller middle section in the afternoon and evening hours.



*E-7: Roof 2 – Overall*



*E-8: Roof 2 – East*



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#### Roof 3

- This hip roof is always exposed to direct sunlight. It is taller than surrounding trees and has no mechanical equipment hoods or vents that would impact the number of solar panels.
- The issue is accessibility to this roof in order to perform routine maintenance and inspection of the solar panels for debris or any other issues



*E-9: Roof 3 – West*



*E-10: Roof 3 – South/East*

#### Roof 4

- At 9:00am, this roof was predominantly in shade from the taller portion of the building and partly because of the tall tree.
- At approximately 10:30am, much of the upper portion of the roof was exposed to direct sunlight.
- The tree to the west of the cart path is very tall. As seen in the Google aerial view, it is casting a very deep shadow into the maintenance yard. As the sun continues to set, it would cast a shadow on this roof, especially in winter months when the sun is lower in the sky.
- There are minimal HVAC exhaust hoods near the roof ridge line that would have minimal effect on a solar array on this roof.



*E-11: Roof 4 – East*



*E-12: Roof 4 – West*

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#### Roof 5

- This roof was only observed at 10:30am. There is still some shade from the building that would have been more pronounced earlier in the morning. It would be exposed to more sunlight in the afternoon and evening.
- There are numerous HVAC exhaust hoods on this roof that would limit the number of solar panels that could be installed on this roof.



*E-13: Roof 5 – Overall*

#### Roof 6

- This is the least impacted low-roof from shading. The tree in the southeast corner of the clubhouse would cause some late afternoon/evening shadowing.
- It is very unlikely that this roof would be able to structurally handle weight of solar panels. Of additional note, the roof is rusting and in poor condition.



*E-14: Roof 6 – Overall*

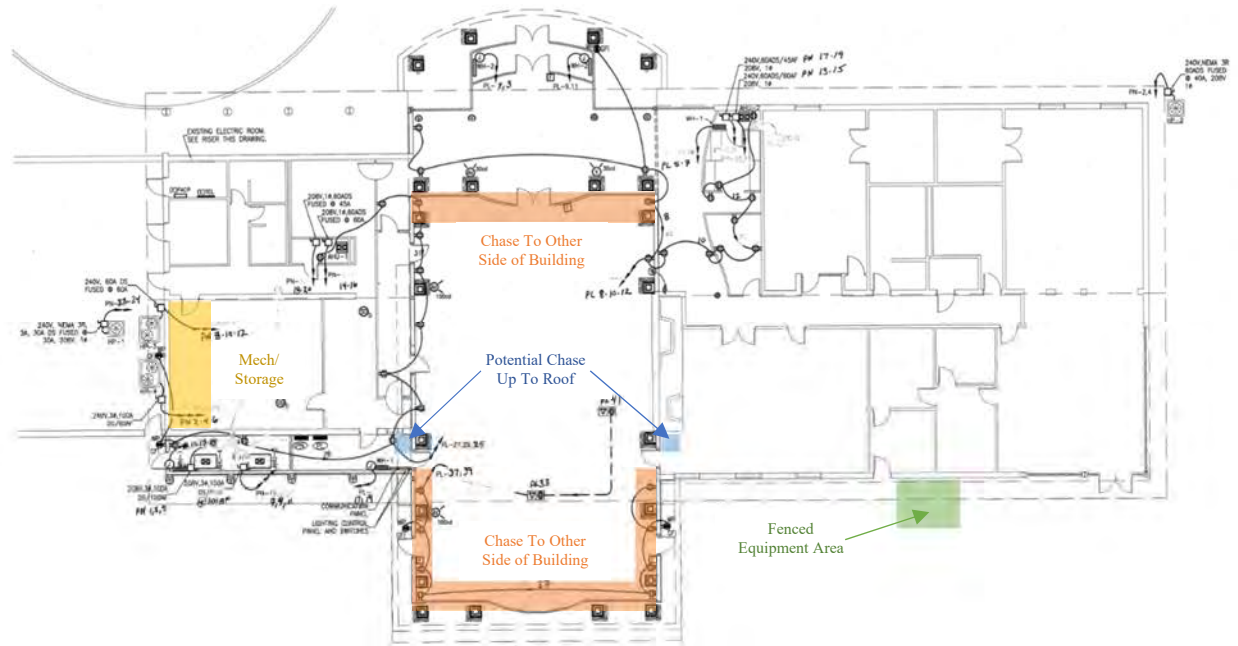
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### Potential Equipment Locations and Penetrations



*E-15: Floor Plan - Equipment Locations and Interior Chases*

Maintenance yard on west side

- For a solar array installed on roof 4, 5, and even 3, the west exterior wall has limited space for inverters and other solar equipment.
- This area is fenced and protected from public view and limits the potential for vandalism.
- Just inside this wall, there are some mechanical and storage room type spaces that could be utilized to accommodate the required solar equipment.



*E-16: West Exterior Wall*

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#### Fenced area on south side

- On the south side of the building near the outdoor patio and pro shop, there is a low wall area partially enclosed by fencing. This area is used to store maintenance equipment. This area could be used for solar equipment for a PV array on roof 1, 2, and even 3.
- This area is fenced and protected from public view and limits the potential for vandalism.



*E-17: South Fenced Area*

#### Interior Chases to Roof

- Conduit for the PV system could be routed exposed on the exterior of the building, but there are a few locations that can be used on the interior of the building.
- On the west end, there is a storage space with a few electrical panels. This is directly below the low roof deck and could also be routed up to the higher roof 3.
- On the east end, there is an event room with an acoustical tile ceiling. Conduit could be routed above the ceiling and adjacent to the fireplace up to the low roof and up to the higher roof 3.



*E-18: West Chase*



*E-19: East Chase*

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### Chases to Other Side of Building from Main Electrical Room

- The central event space is a large 2-story space. At the perimeter are decorative bulkheads with a more ornate paneling system. These bulkheads are equipped with downlights and emergency lighting units, so it is assumed this is how electrical conduits and other utilities are routed to the other side of the building from the main electrical room.
- It would be disruptive to remove these panels to install concealed conduit from the main electrical room, however, this would be required for solar panels on roof 1 or 2.

### Battery Storage

- Backup battery storage is an option. The batteries would be charged during normal sunlight hours and the stored energy would be used during night events instead of all grid power.
- The mechanical/storage room on the west side would be ideal if existing equipment could be reconfigured to accommodate an interior battery wall.
- Some battery storage solutions are rated for both indoor and outdoor use. The maintenance yard could be utilized, however, potential for vandalism and theft would need to be considered.

### Conclusions

- The addition of solar power is electrically feasible for the site, but will require some additional information noted in the Recommendations section of this report.
- Dominion Virginia Energy has an application process (Interconnection Request Form) to obtain approval for a proposed photovoltaic design, including the replacement of the general building meter with a bi-directional meter.
- Roof
  - Other than Roof 3, there is no ideal roof that is continuously exposed to sunlight in the current condition. All roof surfaces will have shadowing to some extent either in the morning or afternoon hours from trees or the building itself. (This is similar to Occoquan where we ended up with four separate arrays). The overall system efficiency will be lower because of these obstructions.
  - A system can be sized and designed for expansion in the future. If only one roof will be selected for a solar array now, the panel serving the system can be sized and provided with the necessary circuit breakers for future roofs. Each roof array can be identified as an alternate so that the costs can be separated.
  - The preferred roof(s) would be closer to the main electrical room (4, 5, and 3) to limit conduit runs. There is chase space to the east side but would include more challenging installation if routing through the building.

### Recommendations

- Perform an examination of Panel MDP
  - Remove panel cover and verify that all existing circuit breakers are being used and are active. There may be a spare or space to use for the PV system. If not, in order to accommodate a PV system, Panel MDP would have to be replaced with a panelboard containing additional spaces in order to add a circuit breaker for the proposed PV system.

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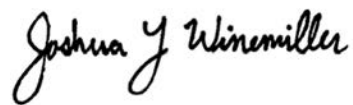
**Algonkian Solar Feasibility Study**

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- Perform a more comprehensive shading study that would provide a complete shade analysis of each roof section throughout the year (shading from the middle building and existing trees).
- Confirm age of roof. Solar is not ideal if the roof will need to be replaced before the full lifespan of the solar PV system has been reached.
- Perform a full structural analysis of roof and truss systems to determine if each roof area can accommodate solar panels on the entirety of the roof or just part of the roof.
- Perform an architectural analysis for roof penetrations/waterproofing and solar panel mounting.

HENRY ADAMS, LLC

A handwritten signature in black ink that reads "Joshua L. Winemiller". The signature is written in a cursive, flowing style.

Joshua L. Winemiller, P.E., LC  
Electrical Engineer

Submitted Electronically